



Federal Aviation Administration Web-Based Internet and Intranet Information and Application

Participant Guide

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FAA Web-Based Internet and Intranet Participant Guide

Introduction

Overview of Participant Guide

The Participant Guide provides the specific documents and resource information presented during the Web-Based Internet and Intranet training. Copies of the Power Point slides utilized during the training are included along with FAA documents and information relating to the application of the web based technical standards. Spaces for notes are provided with the slides.

The instructor will direct you through the power point slides and the resource material provided in the participant guide.

Elements of the Guide

The participant guide includes:

- Web-Based Internet and Intranet Power Point Presentation
- Participants Notes
- FAA Related Documents
- FAA Web Sites
- Specific Coding Examples
- Web Checking Tools
- FAA and Section 508 Resource Information and Materials

Web-Based Internet and Intranet Information and Application Participant Guide

Welcome to the FAA Web-Based Internet and Intranet Training

- Each participant should have signed the registration list and received a nametag.
- The instructor should have given each participant a “Web Accessibility Myths” handout
- Review “Why FAA Web masters and Web developers should comply with Section 508” located in the front of the participants guide.
- The FAA Web-Based Internet and Intranet training will focus on the Section 508 Web Based Internet and Intranet technical standards developed by the Access Board
- This training will present and describe the FAA web-based technical standards specific coding techniques and design issues information and resources available on the FAA Section 508 Intranet web site.
- This training is targeted at providing FAA web masters and web developers with the specific coding techniques for each of the web based technical standards
- FAA has initiated efforts for assuring FAA web sites are accessible for employees with disabilities utilizing assistive technology devices and are Section 508 compliant.

The web-based technical standards training will provide:

1. The Access Board web-based Internet and Intranet technical standards and FAA’s web accessibility policies, procedures and coding techniques
2. FAA’s efforts towards meeting the web access technical standards
3. FAA web based technical standards resources
4. FAA techniques for coding accessible web pages

FAA web masters and web developers need to know how to apply the code to meet the Section 508 web-based Internet and Intranet technical standards.

When you’re finished with this training module, you should understand:

- How Web Accessibility Barriers Affects Persons with Disabilities
- Assistive Technology Utilized by Individuals with Disabilities
- How the Technical Standards of 508 Affect Web Design
- FAA Coding Techniques to Make FAA Web Pages Accessible
- FAA Web Accessibility Resources Available
- FAA Web Accessibility Coding Techniques and Examples
- How to Test a Web Page for Section 508 Compliance

The information provided in this FAA Web-Based Technical Standards training has been divided into the following 4 parts:

- Part 1: Why FAA Web masters and Web developers Need to Care About Web Accessibility
- Part 2: FAA Efforts to Ensure Web Sites are Compliant
- Part 3: FAA Coding Techniques for Designing Accessible Web Pages
- Part 4: Checking FAA Web Page for Accessibility

FAA webmasters will know why and how to create an accessible Web site according to the Section 508 Web-based Internet and Intranet technical standards and how to apply

1. FAA 5 Steps to 508 Web Accessibility for Web Masters and Web Developers
2. FAA Section 508 Web Accessibility Guidelines
3. FAA Section 508 Self Check
4. FAA Frequently Asked Questions
5. FAA Section 508 Web Quick Reference Guide

Part 1: Why FAA Web Masters and Web Developers Need to Care About Web Accessibility

By understanding how individual with disabilities access information on the Web, you will have a better perspective for creating Web sites that are accessible.

- This section is intended to provide FAA web masters and web developers with an overview web accessibility principles and web barriers for individuals with disabilities
- A demonstration and discussion on how a screen reader program (JAWS) reads an accessible and an inaccessible web site will be provided.
- An overview of individuals with disabilities and the assistive technology they utilize to access FAA web pages and sites will also be presented

Example of Compliant Page from FAA Section 508 Intranet Site
(<http://intranet.faa.gov/aio/508>)

FAA Section 508 Resources

Strategies for Section 508 Compliance

The enforcement of Section 508 became effective on June 21, 2001. FAA is striving to develop crosscutting agency-wide policies and procedures to implement and institutionalize the Section 508 requirements. Best practices will be posted to our site. These best practices will provide FAA employees, managers, and customers with creative and innovative strategies that are being undertaken and should be considered to comply with the Section 508 requirements.

FAA Web Accessibility Guidelines for Section 508

The Web Accessibility Guidelines for Section 508 are code examples and techniques for making a web page compliant to Section 508.

FAQ's about Web Accessibility and Section 508

Frequently Asked Questions about PDF files, Web Accessibility, JAVA, Multimedia, Software Applications, Computers, JAWS, Coldfusion, and Section 508 implementation.

FAA Web Accessibility Checklist for Section 508

The Web Accessibility Checklist for Section 508 is 36 questions, broken down into sections, to check a web page for compliance to Section 508.

Section 508 Short Guide

A quick solution guide to common Section 508 issues.<

Online Training

Training guides for managers and webmasters

Do you have a Section 508 Question?

Do you have a question about web pages and Section 508? Send in you question and receive an

answer back and help add to the FAA Section508 FAQ database. Your question can be on any topic about Section 508, including software, hardware, multimedia, and web. If you have a procurement question, please go to the Section 508 Procurement Section.

Need a Section 508 Review?

Register your web site and we will review your site for Section 508 compliance.

Free tools for checking Section 508 compliance

Free tools that can be downloaded or use on the Internet for checking Section 508.

Non-Compliant Page Example

A visual representation of a non-complaint page.

Access Board Links

Direct links to the Access Board's EIT Accessibility Standards and technical guides. Summaries for the six areas of the EIT Accessibility Standards for Web, Software, Telecommunications, Self-contained products, computers, and Multi-media.

Introduction to Screen Readers

This is a 7 minute Quick time file about: screen readers. You will need to download QuickTime 5 player from Apple's web site.

JAWS Keystrokes and Functions

A listing, in table format of JAWS keystrokes and related functions. The listings are for general Windows navigation, IE 5.x, MS-Word, and MS-Excel.

Assistive Technology Devices at the Disability Resource Center

A listing of assistive technology devices at the DOT Disability Resource Center

Alternate Format Vendors

A listing of vendors that supply alternative formats for documents.

Caption Vendors

A listing of vendors that provide captioning.

Web Accessibility Guidelines for Section 508

PageScreamer Tips, Issues, Bugs, and Work Arounds (under development). Information about PageScreamer's bugs, how-tos, work arounds, and issues.

Section 508 of the Rehabilitation Act was intended to remove barriers in Electronic and Information Technology (E & IT) for all types of disabilities. Although Section 508 does not define accessibility, it does provide a baseline for as high an inclusion of persons with disabilities as possible.

While most people think accessibility refers to accessing information on the Web, E & IT accessibility also includes a person's ability to use:

- Intranet.
- Computers.
- Telephones.
- Copiers.
- Printers.
- Fax machines.
- Kiosks.

Think about how you use technology every day. Would you be able to do your job if you were unable to use the computer, the telephone, the copier, the printer, or the fax machine? As a society, we have embraced technology. Most people can hardly conceive of life without it.

However, not everyone can reap its benefits. People with disabilities cannot participate fully because much of the technology is not designed for accessibility.

Inaccessible design creates a digital divide, which blocks some people from taking part in everyday activities and working in an e-environment.

Accessible design allows as many people as possible to use technology regardless of disability, age, or functional limitation.

There is growing awareness for the need for accessible design. In 2000, the World Health Organization estimated that there were 500 million persons with disabilities worldwide - nearly 10% of the world population.

In the US, 54 million people, 20% of the population, have a disability.

In addition, as people are living longer and the population ages, the number continues to grow. If you add persons with temporary disabilities due to accidents or illness, it's easy to understand why accessibility is an important issue.

E & IT is often evaluated for its usability and accessibility. Though the terms are often used interchangeably, there is a difference. Even if the technology is "accessible", there may still be serious usability problems that make it equally difficult for any person, disabled or non-disabled, to use it.

Usability focuses on how intuitive and easy it is for all people to use. Usable designs are consistent and simple to learn to use. Usability and accessibility often go hand-in-hand.

Accessibility is determined by how barrier free the technology is. Accessibility problems are those that make it more difficult for persons with disabilities to use an application or service than for a non-disabled person.

The key to accessibility is that it should be easy for everyone to use, including persons with disabilities.

Persons with Disabilities

Persons with disabilities may have difficulty perceiving or processing some types of information. Imagine trying to surf the Web with the monitor turned off, or with the mouse disconnected. For those who are blind or who have motor disabilities, these limitations are real. They may be unable to use common input devices, such as a keyboard or mouse, and often have to rely on special assistive technology (AT) devices.

Section 508 addresses accessibility issues for persons with these types of disabilities:



Visual disabilities are probably those most associated with access difficulties.

These include:

- Blindness or complete loss of sight.
- Legally blind, low or limited vision.
- Weak, dim or tunnel vision.
- Extreme near- or far-sightedness.
- Color blindness.

Hearing disability is best defined as a lack or reduction in the ability to hear clearly due to a problem somewhere in the hearing mechanism. Many people believe that persons with hearing disabilities are the least affected by E & IT accessibility. However, persons with hearing disabilities are limited to the amount of technology they can use. For example, many hearing-impaired individuals cannot listen to live voice mail or on-line audio chat because amplification cannot be made loud enough or because the sound is not clear to the listener.

Hearing disabilities include:

- Deaf or complete loss of hearing.
- Hard of hearing.
- High- and low-frequency loss.

There is a broad range of mobility impairments, from minor conditions to profound disabilities, that restrict voluntary movement.

Mobility disabilities include:

- Repetitive Stress Injuries (RSI).
- Arthritis.
- Stroke.
- Amyotrophic Lateral Sclerosis (ALS).
- Spinal Cord injuries.
- Loss of limbs or digits.
- Short-term disabilities, such as a broken arm.

To provide maximum accessibility to all users, the section 508 guidelines specify functional performance criteria that essentially define the "spirit" of the law. These criteria, listed in Subpart C of the Access Board standards, apply to all subcategories of the Technical Standards. They require all E & IT products and services to be fully operational without requiring users to have:

- Vision or visual acuity greater than 20/70.
- Hearing.
- Speech.
- Fine motor control or limited reach and strength.

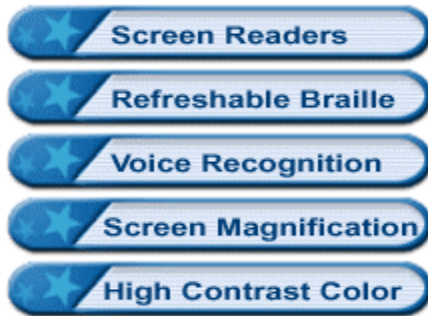
Alternatively, the product or service may be designed to compatibly work with the assistive technology used by persons with disabilities.

Assistive Technology

Persons with disabilities commonly use assistive technology (AT) devices. AT enables a person with a disability to provide inputs and perceive outputs.

AT plays an important role in providing access. However, it is only part of the solution for accessibility. E & IT must be designed to communicate with various types of AT devices. Accessibility problems occur if designers fail to do this when it is possible.

To access information persons with visual disabilities may use:



Although much of the internet is text or graphics, persons with hearing disabilities still have accessibility issues. Increased use of streaming audio and video means that a person with a hearing disability may not be able to access information. Captioning for all audio content increases accessibility.

Persons with hearing disabilities use AT that includes:



Mobility disabilities, whether permanent or short-term, limit a person's ability to use a mouse. Since manipulating a mouse cursor can be laborious, persons with mobility impairments need features that provide keyboard access. They also need to be able to skip repetitive navigation links and access content more directly.

Persons with mobility disabilities typically use AT that includes:

- Keyboard access.
- Breathe control devices.
- Retinal scanning devices.
- Voice input/recognition.

E & IT accessibility affects persons with disabilities.

- Persons with disabilities use different types of assistive technology.
- Accessibility benefits everyone.

Part 2: FAA Efforts to Ensure Web Sites are Compliant

This section of the training outlines in detail FAA's commitment and efforts to ensuring accessible websites for all employees with disabilities. The specific policies and efforts that will be addressed are:

- Secretary Norman Mineta's Electronic and Information Technology Policy Statement
- Daniel Meehan's Memorandum to the Management Board
- FAA 5 Step Process to 508 Accessibility for Web Masters and Web Developers
- Stages of Compliance
- ARP Action Plan
- Section 508 Help Desk Procedures
- Web Policy Council Notice and Guidance
- What FAA Web Masters and Web Developers Should do to Ensure Minimum Section 508 Compliance

Secretary Mineta's Access to Electronic and Information Technology Policy Statement

THE SECRETARY OF TRANSPORTATION

Washington, D.C. 20590

June 14, 2001

Access to Electronic and Information Technology Policy Statement

It is the policy of the U.S. Department of Transportation to provide access to all of its programs, services and information to people with disabilities that is comparable to the level of access provided to others. Section 504 of the Rehabilitation Act, and related Departmental regulations, have made this a requirement since 1978. With the passage of recent amendments to Section 508 of the Rehabilitation Act, we must also ensure that the Department's electronic and information technology (EIT) meets specific accessibility standards for people with disabilities, including both employees and the customers we serve, whenever we develop, procure, maintain or use EIT

Section 508 requires us to provide accessible EIT to the Department's employees with disabilities, to enable them to successfully do their jobs and enjoy the same benefits of training and career opportunities that are available to others in the workforce. Also, Section 508 requires us to provide our customers with disabilities accessible EIT to enable them to enjoy the same benefits of the Department's programs, services and information that are available to others.

To guide us, the U.S. Access Board established new EIT accessibility standards, the General Services Administration issued new EIT acquisition requirements and the Department of Justice (Justice) provided compliance coordination. To implement Section 508, beginning June 21, 2001, the Department must acquire EIT products that meet the new standards and acquisition requirements. In addition, we will strive to develop, maintain, and use EIT that meets the new standards, unless doing so would result in an undue burden. The Department will also cooperate with Justice by providing data about EIT accessibility and other issues.

I am asking all employees to make a strong commitment to providing the Department's programs, services and information, including its EIT, in a format that is accessible to people with disabilities. Also, I am calling on all managers and supervisors to provide the leadership necessary to accomplish these important goals. To help ensure that the Department implements this policy and related requirements, I am directing the Chief Information Officer and the Director of the Departmental Office of Civil Rights to provide policy guidance and technical assistance to the Operating Administrations and Secretarial Officers. Additionally, I expressly delegate to all Administrators the responsibility to conduct compliance procedures, including the processing of complaints and appeals, covered by 49 C.F.R. Part 28.

Norman Y. Mineta

FAA 508 Policy - Daniel Mehan Memorandum

U.S. Department of Transportation
Federal Aviation Administration
Memorandum

Subject: INFORMATION: Current Status of Section 508 Implementation

Date: June 07, 2001

From: Assistant Administrator for Information Services and Chief Information Officer

To: Management Board

Section 508 of the Rehabilitation Act of 1973 requires that the FAA acquire Electronic Information Technology (EIT) that accommodates disabilities of both our staff and customers. Enforcement of Section 508 begins on June 21. The requirements are far reaching, affecting the acquisition of copiers, computers, fax machines, information kiosks, software, operating systems, web sites, and telecommunication products. My office, working with the various LOB's, is coordinating the agency's implementation of Section 508. The steps in the implementation process that must be completed by June 21 in order to show due diligence and a good faith effort are:

1. Ensure that the top 20 web pages visible to the public comply with web accessibility guidelines based on the interpretation of the EIT Accessibility Standards published December 22, 2000.
2. Establish and announce processes by which Federal employees and members of the public who believe an accommodation has not been made can file a complaint as well as develop internal procedures to handle the processing of informal complaints.
3. Update procurement policy in the AMS to require compliance with Section 508 and issue interim guidance to contracting officers on how to apply the policy.

We are working to meet the June 21 deadline for these three steps. In the long term, the agency must ensure that all web sites, both internal and external, comply with accessibility guidelines and ensure that everyone who acquires EIT within the FAA has full and clear direction on how to be compliant with Section 508.

Section 508 is not retroactive, i.e., it does not require an agency to retrofit or replace equipment and software that is not 508 compliant. However, new procurements must be compliant after June 21. Small micro-purchases that are under \$2,500 are exempt from compliance prior to January 1, 2003. These purchases are usually made with a credit card and are generally impractical to comply with the EIT accessibility standards. There is also an exception when acquisition of EIT would pose an "undue burden" on the agency. There is no clear guidance within the government and industry right now as to what constitutes "undue burden" and what steps we must take to be compliant and demonstrate compliance. Section 508 allows lawsuits for non-compliance under existing sections of the Rehabilitation Act and it is expected that a number of lawsuits will be filed after June 21.

AIO has the lead to work with DOT, the LOB's, and the staff offices to develop the agency's long-term approach to Section 508. Calvin Mitchell and Deborah Douglas-Slade from my office have the lead for me and will continue to work with your staff. The list of Section 508 points of contact for each member of the Management Board is attached to this memo.

Your cooperation and support in this important effort are appreciated.

Daniel J. Mehan

FAA 5 STEPS TO 508 WEB ACCESSIBILITY FOR WEB MASTERS AND WEB DEVELOPERS

Web masters and web developers who are responsible for designing and making changes to the Federal Aviation Administration (FAA) web sites should follow the five (5) steps identified below. These steps will help you understand how to make web sites accessible to various assistive technology devices.

STEP ONE: TRAINING

Complete the web accessibility course offered by the General Services Administration. The course materials are located at: www.section508.gov/508/. The course is entitled, “Federal IT Accessibility Initiative Designing Accessible Web Sites.” The course will take approximately 2 hours.

STEP TWO: ACQUIRE TECHNICAL KNOWLEDGE, GUIDANCE, AND RESOURCES TO MAKE YOUR WEB SITE 508 COMPLIANT

Web developers and those maintaining websites need to review the Section 508 Accessibility Guidelines located at <http://intranet.faa.gov/aio/508/index.cfm?section=10111>. These guidelines will help you correct compliance problems resulting from: Portable Document Format (PDF) files, Forms, Tables, Frames, Scripts, Applets, and Plug-ins, Non-Text Elements, Image Maps, Multimedia, Color, Navigation and Design and Style Sheets. The first reading should take about 1 hour, but we expect that only through use over several months will you become completely familiar with the guidelines.

Next, you need to review each web page for compliance. We provide a “checklist” to make this easier. To access the checklist, go to the Web Accessibility Evaluation Form located at <http://intranet.faa.gov/aio/508/index.cfm?section=10112>. This gives a (508) section-by-section analysis that helps you review and validate the 16 standards required by the Access Board. Validation should be relatively quick for each page, less than 20 minutes, and will go faster for similar pages.

You may also want to refer to the Frequently Asked Questions (FAQs) at <http://intranet.faa.gov/aio/508/index.cfm?section=10113> to give you further guidance and help you understand and answer most questions about Section 508 compliance. This will take about 1 hour to review.

Finally we have provided a 2 page Section 508 Short Guide at <http://intranet.faa.gov/aio/508/index.cfm?section=101133> which will give you quick solutions to common 508 problems. This guide allows you to quickly access Section 508 coding methods for the web. It provides a list of available plug-ins and viewers. The actual code is readily available for images, skip links, forms, tables, frames, Java applets, and navigation and design. A web master or web developer needs only to copy the code example, add additional coding to configure for the web page, and put it in the appropriate place.

STEP THREE: APPLY KNOWLEDGE, GUIDANCE AND RESOURCES

Apply the information and knowledge acquired in Step One and Step Two when creating web pages and making updates to your web sites. Once you have done the work in step 2, this should be a relatively straightforward effort for each new and existing website. Should you need assistance or have questions, please contact the Section 508 Accessibility Help Desk at (202) 267-8091.

STEP FOUR: TEST YOUR WEB PAGES

You need to now test each new web page or updated page. To do this you need to run a 508-compliance checker which checks the “html” code structure of the page, and an adaptive technology checker which checks how the web page reads to an individual with a visual disability. We include ways to modify web pages for other disabilities i.e. mobility deficits or hearing-impairments, but there are not yet adaptive checkers for this area. A list of free Section 508 checkers can be found at <http://intranet.faa.gov/aio/508/index.cfm?section=10118>. The DOT has an open BPA for PageScreamer from Crunchy Technologies. Other Section 508 checkers are from HiSoftware, SSB, and a plug-in package for Dreamweaver from Lift Technologies. An adaptive technology that can be downloaded for free and used for 40 minutes at a time is JAWS. This download is located at http://www.freedomscientific.com/fs_downloads/jaws_form.asp. JAWS will allow you to check how the web page reads to someone who is visually impaired and is excellent way of determining if the web page is accessible. Information on how use JAWS is located at <http://intranet.faa.gov/aio/508/index.cfm?section=10117>.

You will need training on and practice with all the above tools to become sufficiently comfortable with working with them. You will be able to use JAWS with some level of competence in about 2 hours. Each of the Section 508 checkers require varying degrees of time to become competent with the tool. The time can be anywhere from 3 – 5 hours of reading and working with the tool.

STEP FIVE: PROVIDE FEEDBACK TO 508 TEAM

We ask that you certify whether your web site is registered in the 508 web site directory at <http://intranet.faa.gov/aio/508/index.cfm?section=101134>. If it is not there, you will find instructions how to register your web site.

You may also access the FAA Section 508 website at <http://intranet.faa.gov/aio/508/index.cfm?section=101131> to provide feedback on issues you may have pertaining to the 5 step process for Web Accessibility for Web masters and Web developers, PDF files, skip links, Java, ColdFusion, etc., and recommendations for improvement to Section 508 information.

Finally if you need additional 508 training, submit your request at the following web site: http://intranet.faa.gov/aio/508/train_idx.cfm?section=109991

FAA's Efforts to Ensure a Web page or Web site is Compliant

On June 14, 2001, Secretary Mineta issued an access to electronic and information technology policy statement. It requires the U.S. Department of Transportation (DOT) to provide access to all of its programs, services and information to people with disabilities that is comparable to the level of access provided to others. This policy establishes the mandate that the DOT meets the standards and acquisition requirements of Section 508 of the Rehabilitation Act of 1973. Section 508 requires that the Department's electronic and information technology (EIT) meet specific accessibility standards for people with disabilities, including both employees and the customers, whenever the agency develops, procures, maintains or uses EIT. As a result, the FAA must provide accessible EIT to its employees with disabilities, to enable them to successfully do their jobs and enjoy the benefits of the FAA's programs, services and information that are available to others.

Section 508 requires the Architectural and Transportation Barriers Compliance Board (known as the Access Board) to publish standards that define the terms and the technical and functional performance criteria necessary for compliance. The Access Board is an independent Federal agency devoted to accessibility for people with disabilities. The Board is responsible for developing and maintaining accessibility standards for the EIT. **The standards developed by the Access Board** were published in the Federal Register on December 21, 2000, as 36 CFR Part 1194.

Web site: <http://www.accessboard.gov/sec508/508standards.htm>

To implement Section 508, beginning June 21, 2000, the FAA has taken steps to develop cross cutting agency-wide processes and procedures for Section 508 compliance. In particular, the FAA Section 508 teams have developed policy and interim guidance for the Acquisition Management System, produced standard operating procedures for new procurements, developed the Section 508 statement of work for agency-wide training, and identified the Top 20 Intranet and Internet web sites for 508 compliance.

In an effort to comply with Section 1194.22, Web-based Intranet and Internet information and applications, the FAA has developed Section 508 Accessibility Guidelines. **The Section 508 Accessibility Guidelines and Checklist** are available on the following

web site: <http://intranet.faa.gov/aio/508/index.cfm?section=10111> and
<http://intranet.faa.gov/aio/508/index.cfm?section=10112>

These guidelines provide detailed guidance on how to comply with the Access Board standards. The major areas addressed are: Portable Document Format (PDF), scripts, applets and plug-ins, non-text elements, image maps, multimedia, color, navigation and design and style sheets. A Web Accessibility Self-Evaluation Form has been developed that allows a webmaster or web developer the means to conduct a self-evaluation of a web page.

FAA has identified the Top 20 Internet and Intranet web pages and web sites, which are listed at: Web Site: <http://intranet.faa.gov/aio/508/index.cfm?section=1088>

Each Line of Business (LOB) and staff office (SO) had the responsibility to ensure Section 508 compliance of the Top 20 by the December 31, 2001 deadline. Also, many of the other LOBs and Staff Offices that are not in the Top 20 are beginning to make their pages compliant with Section 508. The FAA Section 508 web site listed the Top 20 web sites and indicates whether each is in compliance with the requirements. The information on the web site in the tables reflects the results on the day of the review. On-going efforts by the LOB and SO may not be reflected in the tables.

The following LOBs have websites that are included in the Top 20: AHR, AIO, APA, ARA, ARC, ARP, ATS, and AVR. It is the goal of the agency to ensure that these sites are compliant within timeframes specified below. The Section 508 implementation strategy is for each LOB to develop an action plan to ensure compliance of its Top 20 Internet and Intranet web sites. The stages of compliance are:

- **Stage 1:** Every home page and one level (link) down will be Section 508 compliant. Completion date: December 31, 2001
- **Stage 2:** Second level links within the web sites control must be compliant. Completion date: March 31, 2002
- **Stage 3:** Successive level links within the web sites control must be compliant. Completion date: June 21, 2002

LOB's with Web sites that are not listed in the Top 20 are also required to develop an action plan that shows their strategy for Section 508 compliance. These **web sites** are listed at: http://intranet.faa.gov/aio/508/q_idx.cfm?section=44

ARP, one of the Top 20 LOBs identified, has developed an action plan that shows how it plans to adhere to the Section 508 compliance. See this plan at: <http://intratest.faa.gov/aio/508/index.cfm?section=105502>

It is the goal of the FAA Section 508 Coordinator to advise that each LOB in the Top 20 and the remaining LOBs and SOs prepare a similar action plan. An action plan will show due diligence and a good faith effort to comply with the Section 508 requirements.

All LOBs and SOs, when complying with Section 508, for web sites should at a minimum ensure that:

- All contractors and federal employees that make web page and/or web site changes to a federal web site ensure that each web page and web site comply with the requirements of the Access Board standards.
- Each web page displays an accessibility link.

The FAA Section 508 Help Desk responds to technical inquiries from personnel in Headquarters and the Regions from 8:00 a.m. to 5:00 p.m. The FAA Section 508 Help Desk can be contacted at (202) 267-8091 or directly from the web site.

On March 26, 2002, FAA Administrator Jane Garvey signed a notice entitled, “Managing the Web.” This notice creates a Web Policy Council (Council) that is authorized to establish mandatory interim design and content standards for all publicly available components of the FAA Internet web sites. FAA LOBs are required to adhere to the Office of the Assistant Administrator for Information Services and Chief Information Officer’s guidance covering compliance with Section 508 of the Rehabilitation Act.

This guidance is located at **web site** <http://intranet.faa.gov/aio/508>.

The Council issues design and content standards that sites in the FAA web must meet. It ensures those standards are kept up-to-date. It monitors implementation of the standards and has primary responsibility for the FAA homepage. It coordinates the issuance of other general web policy documents so that web content managers and developers receive guidance from one source. The Council will recommend a permanent structure for managing the FAA web. You will find out more about the Council at <http://interweb.faa.gov/webrules/>.

Example of ARP's Action Plan		
Task	Est. Completion Date	Completion Date
1.0 Evaluate Home and Level-One Pages	11/29/01	11/26/01
1.1 Review ARP Internet Home page and first-level links	11/14/01	11/14/01
1.1.1 Determine which pages can be deleted	11/14/01	11/14/01
1.1.2 For remaining pages, determine what changes are needed for Section 508 compliance	11/20/01	11/20/01
1.2 Review ARP Intranet Home page and first-level links	11/20/01	11/20/01
1.2.1 Determine which pages can be deleted	11/20/01	11/20/01
1.2.2 For remaining pages, determine what changes are needed for Section 508 compliance	11/21/01	11/20/01
1.3 Review Regional Home pages	11/28/01	11/26/01
1.3.1 Determine if pages are compliant	11/28/01	11/26/01
1.3.2 Communicate potential problems to regional Web authors and ask that they fix problems by 12/31/01	11/28/01	11/26/01
2.0 Remediate ARP Home and Level-One Pages	12/31/01	
2.1 Remediate Internet Pages		
2.1.1 Delete outdated pages		
2.1.2 Implement new ARP template		
2.1.3 Fix Section 508 problems		
2.1.4 Run pages through Accessibility Checker and PageScreamer		
2.1.5 Fix any additional problems found		
2.1.6 Ask Grady to conduct final review		
3.0 Remediate ARP Home and Level-One Pages	12/31/01	
3.1 Remediate Intranet Pages		
3.1.1 Delete outdated pages		
3.1.2 Implement new ARP template		
3.1.3 Fix Section 508 problems		
3.1.4 Run pages through Accessibility Checker and PageScreamer		

3.1.5 Fix any additional problems found		
3.1.6 Ask Grady to conduct final review		
4.0 Remediate Regional Home Pages	12/31/01	
4.1 Remediate Intranet and Internet Home Pages		
4.1.1 Delete outdated links		
4.1.2 Fix Section 508 problems		
4.1.3 Run pages through Accessibility Checker and PageScreamer		
4.1.4 Fix any additional problems found		
4.1.5 Ask Grady to conduct final review		
4.1.6 Identify 10 most critical/high-use pages on Internet and Intranet sites		
5.0 Evaluate ARP Level-Two Pages	1/31/02	
5.1 Review ARP Internet second-level pages		
5.1.1 Determine which pages can be deleted		
5.1.2 For remaining pages, determine what changes are needed for Section 508 compliance		
5.2 Review ARP Intranet second-level pages		
5.2.1 Determine which pages can be deleted		
5.2.2 For remaining pages, determine what changes are needed for Section 508 compliance		
6.0 Remediate ARP Level-Two Pages	3/31/02	
7.1 Remediate Internet Pages		
6.1.1 Delete outdated pages		
6.1.2 Implement new ARP template		
6.1.3 Fix Section 508 problems		
6.1.4 Run pages through Accessibility Checker and PageScreamer		
6.1.5 Fix any additional problems found		
6.1.6 Ask Grady to conduct final review		
7.0 Remediate ARP Level-Two Pages	3/31/02	
7.1 Remediate Intranet Pages		
7.1.1 Delete outdated pages		

7.1.2 Implement new ARP template		
7.1.3 Fix Section 508 problems		
7.1.4 Run pages through Accessibility Checker and PageScreamer		
7.1.5 Fix any additional problems found		
7.1.6 Ask Grady to conduct final review		
8.0 Evaluate ARP Level-Three Pages	4/30/02	
8.1 Review ARP Internet third-level pages		
8.1.1 Determine which pages can be deleted		
8.1.2 For remaining pages, determine what changes are needed for Section 508 compliance		
8.2 Review ARP Intranet third-level pages		
8.2.1 Determine which pages can be deleted		
8.2.2 For remaining pages, determine what changes are needed for Section 508 compliance		
9.0 Remediate ARP Level-Three Pages	6/21/02	
9.1 Remediate Internet Pages		
9.1.1 Delete outdated pages		
9.1.2 Implement new ARP template		
9.1.3 Fix Section 508 problems		
9.1.4 Run pages through Accessibility Checker and PageScreamer		
9.1.5 Fix any additional problems found		
9.1.6 Ask Grady to conduct final review		
10.0 Remediate ARP Level-Three Pages	6/21/02	
10.1 Remediate Intranet Pages		
10.1.1 Delete outdated pages		
10.1.2 Implement new ARP template		
10.1.3 Fix Section 508 problems		
10.1.4 Run pages through Accessibility Checker and PageScreamer		
10.1.5 Fix any additional problems found		
10.1.6 Ask Grady to conduct final review		

11.0 Make New/Revised Pages Compliant	Ongoing	
11.1 Ensure new/revised pages follow 508 checklist		
11.1.2 Implement new ARP template		
11.1.3 Fix Section 508 problems		
11.1.4 Run pages through Accessibility Checker and PageScreamer		
11.1.5 Fix any additional problems found		
11.1.6 Ask Grady to conduct final review		
12.0 Prepare Long-Term Compliance Plan	7/30/02	
Draft-awaiting input from Regional Web contacts		
11/29/2001 action plan 110201.xls		

Section 508 Help Desk Procedures

A link should be on every page for customers/employees to be able to request accessibility assistance. The link for external pages is Accessibility Assistance and the link for internal pages is Section 508 Assistance <http://interweb.faa.gov/aio/508>. If this is not possible, then a link on the front page of the website will be sufficient.

When a request is submitted to the Accessibility Help Desk, the Accessibility Help Desk will determine if the request is for information or accessibility to information. If the request is for information; then the Accessibility Help Desk will forward the request to the appropriate LOB. The LOB will then resolve the request.

If the request is for accessibility to information, the Accessibility Help Desk will determine if the request is for a document (i.e. PDF) in an accessible format or accessibility to online forms, web pages, images, tables, etc. Once the Accessibility Help Desk has determined the request, it will be forwarded to the appropriate LOB 508 representative with the documentation.

The LOB 508 representative will maintain documentation of the request through email. Upon receiving the email request, the LOB 508 representative will have 15 days to resolve the request. If the LOB 508 representative can resolve the request, the representative will document the resolution and notify the Accessibility Help Desk of the resolution as well as the requestor.

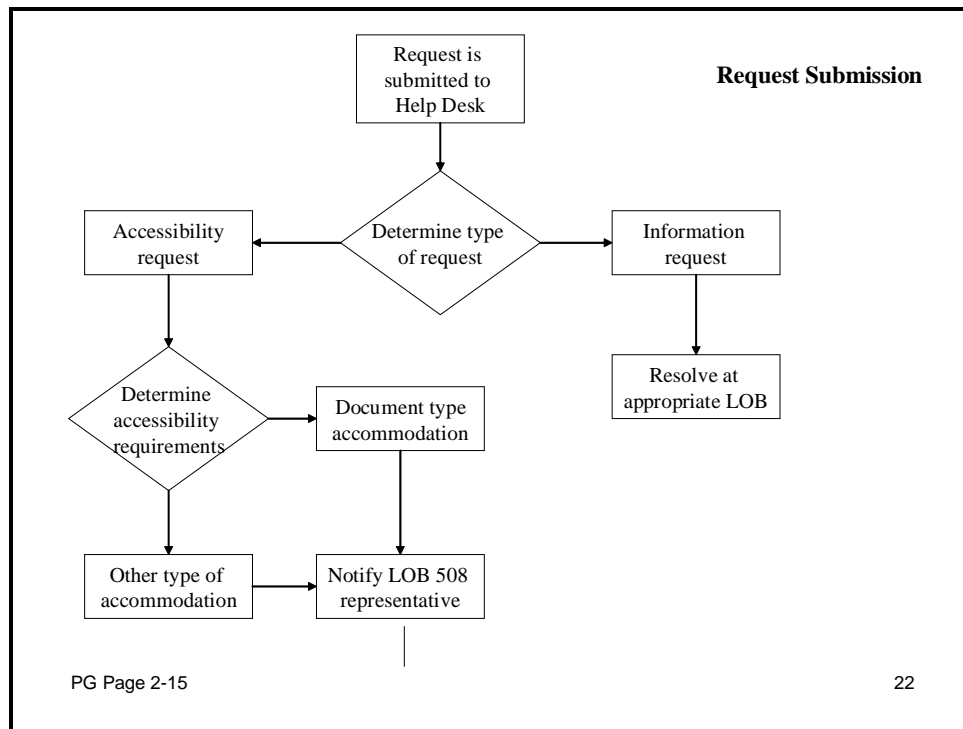
If the LOB 508 representative sends the request to the appropriate Webmaster for resolution, then the Webmaster will determine if a resolution is applicable. If the request is resolved, then the Webmaster will notify the LOB 508 representative. The representative will then notify the Accessibility Help Desk of the resolution as well as the requestor.

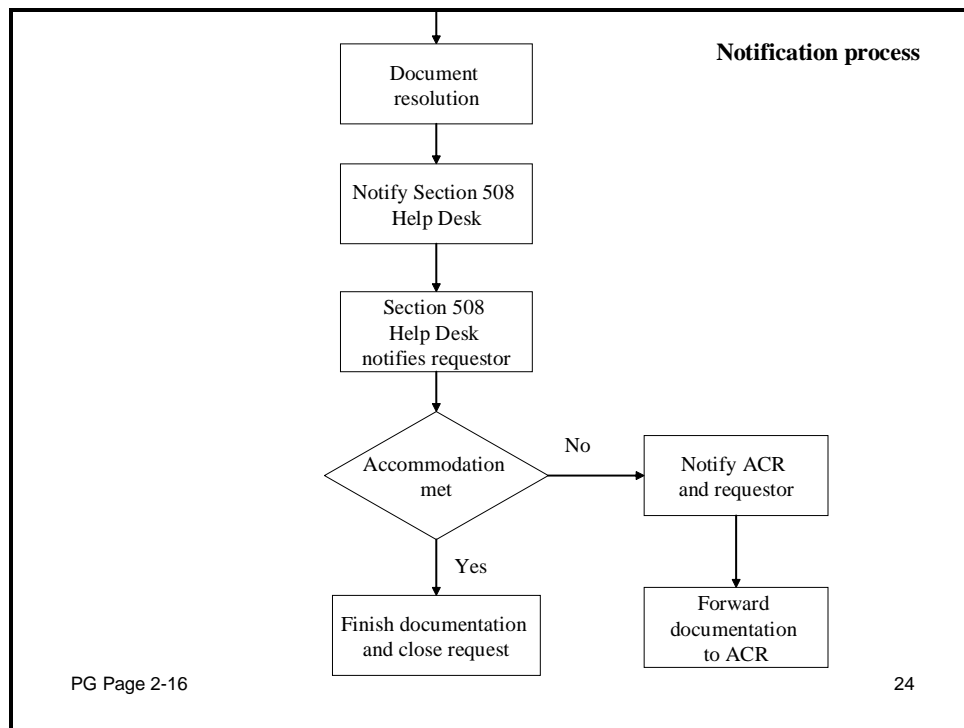
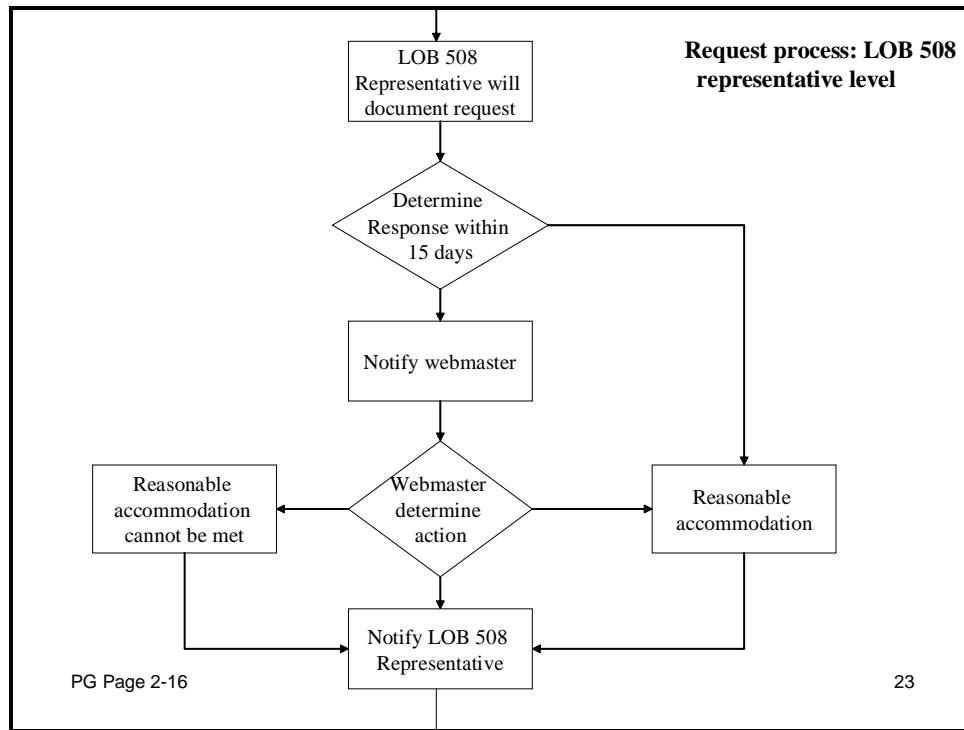
If the Webmaster cannot provide a resolution to the request, then the Webmaster will then notify the LOB 508 representative that a resolution could not be attained and state the reason why. The representative will then notify the Accessibility Help Desk that a resolution could not be attained. The Accessibility Help Desk will then notify the requestor that a resolution could not be attained and a form letter from ACR will be sent to the requestor.

All documentation regarding requests that cannot be resolved will be forwarded to ACR.

For a PowerPoint presentation of this page, download Help Desk PowerPoint document.

Section 508 Help Desk Complaint Procedure for FAA Web Sites Process Coordinated with Office of Civil Rights





EIT ACCESSIBILITY STANDARD	SOLUTION
(a) A text equivalent for every non-text element shall be provided.	Check all images for descriptive text.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation	Provide closed captioning and audio description for multimedia that are related to the mission of the agency.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from	Check if color is used to convey information (i.e. Click on the red button).
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Check if web page can be viewed with style sheets turned off or alternative style sheet.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Provide client-side descriptive text links.
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an	Replace server-side images with client-side images.
(g) Row and column headers shall be identified for data tables. (h) Markup shall be used to associate data	Identify row and column headers with SCOPE or ID and HEADERS attributes.
(I) Frames shall be titled with text that facilitates frame identification and navigation.	Provide a descriptive title for each frame.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Replace images that flicker greater than 2 Hz or less than 55 Hz.
(k) A text-only page when compliance cannot be accomplished in any other way.	Verify that a page cannot be made compliant and provide means that text page will be updated at the same time that the
(l) When pages utilize scripting languages, the information provided by the script shall be identified with functional text that can be read	Check for scripting pop-up windows and scripting "ON" event handlers (i.e. On-Click, On-Change, etc.).
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the	Provide a link to the latest version of the plug-in on every web page that uses an applet, plug-in, or application requiring a

client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	applet, plug-in, or application requiring a plug-in.
(n) Electronic forms, online, shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form.	Associate the LABEL tag to all form fields.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Provide a “skip link” as the first or second link on a web page.

Part 3: FAA Coding Techniques for Developing Accessible Web Pages

The following FAA documents will provide FAA web masters and web developers with the techniques and information to create accessible web sites.

- *FAA Web Page Examples*
- *FAA Web Accessibility Guidelines*
- *FAA Section 508 Self-Check,*
- *Frequently Asked Questions*
- *Quick Web Reference Guide*

FAA Specific Coding Techniques

FAA Web Page Examples

Access Board Web Based Technical Standard and Rationale

FAA Web Accessibility Guidelines

FAA 508 Self Check

FAA FAQ's

FAA Quick Reference Guide

FAA Specific Coding Examples

Examples for Module 4, Web Applications

1194.22 (sub-paragraph)	Web file name	Associated web page
(a) Non-Text Elements	AIO.htm	www.faa.gov/
(b) Multimedia	None	None
(c) Color	Color.htm	www.faa.gov/ntap/
(d) Style Sheet	AIO.htm	http://www.faa.gov/aio/common
(e) Server-side Images	None	None
(f) Client-Side Images	Infosec	intranet.faa.gov/infosec
(g) & (h) Tables	ID: OAI.htm	www.faa.gov/avr/aai/aaihome.
(i) Frames	Frames.htm	http://Intranet.faa.gov/ahr
(j) Flicker	None	None
(k) Text-Only page		http://gps.faa.gov
(l) Scripting		www.faa.gov/runwaysafety
(m) Plug-in	AIO.htm	http://www.faa.gov/aio/common
(n) Forms	Form.htm	Jobs.faa.gov/allfaajobs.htm
(o) Skip Link	AIO.htm	http://www.faa.gov/aio/common

		/documents.htm
(p) Time delays	None	None

1194.22 Web Based Technical Standards

Guideline (a): A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).

Rationale

This provision applies to all components of a web page that are not inherently textual. Non compliance with this provision has the greatest negative effect on users with disabilities, especially those who are blind.

Images. When a blind person listens to a web page, they listen to text passed to and processed by a speech synthesizer. A speech synthesizer can only translate from text to speech, not from images to speech. That is why the `alt` attribute is needed on every `IMG` element. In this way, a screen reader or talking browser will replace the image with the textual value of the `alt` attribute, the "alt-text"

FAA Section 508 Web Accessibility Guidelines

Non-Text Elements

Non-text elements that provide information required a descriptive text equivalent for meaningful content or facilitates navigation, e.g., images, graphs, charts, animation, etc.

Issues

- A. Assistive Technology devices cannot provide meaningful information about non-text elements without equivalent descriptive text.
- B. If more information is required to convey meaningful content then use the 'longdesc' attribute of D-Link. The 'longdesc' attribute is not supported by I.E. 6.x, Netscape 6.x, AOL 7.0 or less but you should use it to prevent future remediation of the web page.

How to Test

- A. Review the source code for 'alt' attribute for images (see examples below).
- B. Verify link provided by the 'longdesc' attribute and D-Link.
- C. Check images (including animation) by placing the mouse over the image.
- D. Check for equivalent and meaningful descriptive for the image.

Example A: Image source with 'Alt' attribute

```
<img src = "http://www.homelogo.gif" alt=" Return to company home page">
```

Example B: Image source with 'longdesc' attribute

Example C: Image that does not convey information (assistive technology devices will skip images that have alt="")

Example D: Image with D-Link

[D]

FAA Section 508 Self Check

Section 6: Non-Text Elements

Do all non-text elements have text equivalent descriptions using the "alt" attribute or an alternative method for equivalent description?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, there are no non-text elements on this page

FAA Section 508 Frequently Asked Questions

Non-Text Elements

1. Are Maxmate files accessible?

Answer: No, they have the same problem as PDF files.

2. How much descriptive text is enough?

Answer: This is a judgement call but you want the text information to convey the image to the user. There is tendency to overcompensate just as there is a tendency to supply very little information.

3. If I have an image and a text description next to the image is that adequate?

Answer: No, you will need to supply some descriptive text in the ALT attribute. You cannot do alt="", this does not provide descriptive text to the image. The descriptive text does not have to be as detailed as the information you supplied on the page.

4. I used the following for an arrow GIF that doesn't convey information: alt=" ". The screen reader keeps saying "space".

Answer: The reason is that the screen reader is reading the 'space' character between your quotes. Remember that the screen reader will interpret the information between the quotes.

5. What do I do if I have an image with an embedded link; I have the ALT attribute set to: alt="link to FAA home" and the screen reader reads the image it says "link link to FAA home"?

Answer: Screen readers need to notify the user that it is on a hyperlink and it does this by saying "link". The screen reader will read the ALT attribute, that is why you are

hearing "link link to FAA home". Just remove the 'link to' and you will eliminate the extra 'link'. Also, this applies to "graphic of" or "image of" for images.

6. Can I use an animated GIF?

Answer: Yes, just provide descriptive information as to the action of the GIF. JAVA and FLASH animation are not the same and those issues will be addressed in a different section.

7. Is there a problem with using a blank space in the ALT tag for spacer image?

Answer: Even though it meets the Section 508 requirement, it is better to use ALT="". If you don't, you will end up with a bunch of white boxes on your web page if someone mouses over a spacer.gif

8. Is it correct to use the following for descriptive text: alt="balloon.GIF (112 bytes)"?

Answer: No, this does not convey a description of the image. It is good practice not to use the file name but to give a visual description of the image. A visual user will immediately get the visual clues, this information needs to be conveyed in the ALT attribute for people using assistive technology devices.

9. Do I need descriptive text for arrow or bullet GIFs?

Answer: If the GIF does not convey information, you do not have to put in descriptive text but you do need to have an ALT attribute. This is the syntax for this type of use of the ALT attribute: alt="".

FAA Section 508 Quick Web Reference

IMAGES

Always use an ALT Tag:

Provide equivalent descriptive text to meaningful graphics:

```

```

Non-Navigation graphics:

```

```

```

```

Avoid the following:

1. Avoid using ALT=" "; Reason: When a visual person does a 'mouse-over' on a spacer or bullet gif, they will see an empty little pop-up box.
2. Avoid using "link" or "graphic" in the alt description; Reason: The user is already aware that the image is a graphic or link. The assistive technology device will say "graphic graphic" or "graphic link link".

PDF Files

A PDF file must be properly tagged for accessibility and rendered correctly by an assistive technology (AT) device. If a PDF file cannot be properly tagged or rendered, by an AT device, then an alternative format must be provided. The alternative format for internet web pages is HTML, TXT, or RTF.

Issues

- A. PDF is a graphical format and assistive technology devices can not correctly interpret the information unless properly tagged for accessibility.
- B. Alternative formats must provide meaningful equivalent information as the original document.

How to Test

- A. Use a screen reader to determine to determine if the information is correctly interpreted.
- B. Validate the content in the alternative format to insure it is equivalent to the original content and updated if any changes are made to the original file.

FAA Section 508 Self Check

PDF Files

Have you provide an alternative format for PDF files such as TXT, RTF, or HTML formats?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this page does not include PDF files

Have you provided a link to the appropriate plug-in?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this page does not include PDF files

FAA Section 508 Frequently Asked Questions

PDF

1. Are there any training videos for PDF files?

Answer: Adobe has a video series on using Acrobat 5.0x for accessible PDF documents. You will need to download Quicktime 5 from Apple Computers.

Usability enhancements of Acrobat 5.0 (3:03 minutes)

Working with screen readers (2:53 minutes)

Working with existing PDF files (2:36 minutes)

Working with forms (3:46 minutes)

Working with Microsoft Office 2000 files (6:13 minutes)

2. I understand that Adobe has a plug-in for accessibility for PDF files?

Answer: Adobe has a Make Accessible plug-in that creates a tagged Adobe PDF file from an untagged PDF file. (This plug-in does not properly tagged all elements, please review Adobe booklets about accessible PDF files).

3. What are the alternative formats for PDF files?

Answer: The alternative formats for the FAA Internet is HTML, TEXT, and RTF. The alternative formats for the FAA Intranet is HTML, TEXT, RTF, MS-WORD, MS-Powerpoint, and MS-Excell.

MS-WORD, MS-Powerpoint, and MS-Excell documents must be accessible by an adaptive technology device. If the above formats cannot be made accessible then an alternative format must be provide in HTML, TEXT or RTF.

4. Is it possible to convert a PDF file to an accessible HTML file?

Answer: Yes, you will need the following download from Adobe, download Save As XML plug-in (beta). This tool allows for the exporting of text from a tagged Adobe PDF to XML, accessible HTML, or TXT formats. Your PDF file must be tagged (check the FAQ on making PDF Files accessible) correctly to make an accessible HTML. If not, the plug-in will still convert the PDF file to an HTML format.

Please follow the instructions for installing the plug-in:

After downloading a ".exe" file in Windows, double-click on the ".exe" file to access the file's contents.

1. Close all applications.
2. Download the Plug-in to your local drive.
3. Double click the file "SaveAsXMLPlugIn_beta.exe".
4. Proceed through the Save As XML Plug-In Installer dialog boxes.
5. Launch Acrobat 5.
6. Locate the new options under the Save As Type pop-up in the File>Save As... dialog box.

For additional information you can go to Save As XML page for additional information.

5. How do I make my PDF files accessible?

Answer: You are required to make PDF files after June 21, 2001 accessible or provide an alternative format.

Adobe has two booklets (in PDF format) available explaining how to make a PDF file accessible for existing PDF files, scanned PDF files, and MS-Office 2000 files. The first book is How to create accessible Adobe PDF File (32 pages) and the second book is Advance Techniques for creating accessible PDF Files (32 pages). PDF files with tables at this time will need an alternative format.

6. Do I need the plug-in viewers for MS-Office Standard products?

Answer: There are two answers for this question. In reference to the FAA Intranet, the answer is "No" but in regards to the FAA Internet the answer is "Yes".

The EIT Accessibility Standards states: "1194.22 (m) ...several private companies have developed proprietary file formats for transmitting and displaying special content, such as multimedia or very precisely defined documents. Because these file formats are proprietary, they cannot ordinarily be displayed by web browsers. To make it possible for these files to be viewed by web browsers, add-on programs or "plug-ins" can be downloaded and installed on the user's computer that will make it possible for their web browsers to display or play the content of the files. This provision requires that web pages . . . provide a link to a plug-in that will meet the software provisions."

Since the FAA is standardized on MS-Office Standard products, a plug-in is not required for the FAA Intranet.

Below are links for the MS-Office viewer plug-ins:

1. MS-Word:

<http://office.microsoft.com/downloads/default.aspx?Product=Word&Version=95|97|98|2000|2002&Type=Converter|Viewer>

2. MS-Excel:

<http://office.microsoft.com/downloads/default.aspx?Product=Excel&Version=95|97|98|2000|2002&Type=Converter|Viewer>

3. MS-PowerPoint:

<http://office.microsoft.com/downloads/default.aspx?Product=PowerPoint&Version=95|97|98|2000|2002&Type=Converter|Viewer>

Guideline (b): Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.

Rationale

This provision applies to the text equivalents of video and audio for any web based multimedia presentation. Those text equivalents must be synchronized with the presentation

If multimedia content on the Web is audio, such as a Real Audio feed from a news conference, an individual who is deaf or hard of hearing cannot access that content unless provision is made for a visual presentation of audio content. Similarly, if the content is pure video, an individual who is blind or an individual who has a severe vision loss, will miss the message without the important information in the video being described.

When audio and video are combined, the current provision requires that the text equivalent be synchronized with the presentation. That means that the text equivalent for audio information in a multimedia presentation must be presented as captions in the video stream. It further means that important information in the video must be provided as an audio description.

Captioning is the process of converting the audio portion of a video production into text which is displayed on the screen. Audio description makes a video program accessible to blind and visually impaired individuals. Audio description uses the Secondary Audio Program (SAP) channel to transmit the full soundtrack of a program. A narrator's voice is added to that soundtrack to describe what is happening visually in the program.

FAA Section 508 Web Accessibility Guidelines

Multimedia

Provide synchronize video caption and/or audio caption for video and audio output. If captions are not provided then provide a text equivalent or transcript.

Issues

- A. Visually impaired users cannot interpret the video content without some equivalent option.
- B. Audible impaired user cannot interpret audio content without some equivalent content.
- C. If a web page uses a player or plug-in to render multimedia, then a link must be provided for that player or plug-in.
- D. Per section §1194.21 (Software Applications and Operating Systems) player and plug-ins must be accessible.

How to Test

- A. Check for video caption or alternative format.
- B. Check for audio caption of alternative format.
- C. Check for link to player or plug-in.
- D. Check with vendor for player or plug-in compliance.

FAA Section 508 Self Check

Multi-media

Is text captioning provided audible output and audible output for all-important visual information?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, there is no multimedia content on this page

If you have multimedia content, is the audible and video out synchronized to the dynamic content?

- a. ☐ Yes
- b. ☐ Yes/No, audible output is synchronized to important video information
- c. ☐ Yes/No, text captioning is synchronized to audible output
- d. ☐ No
- e. ☐ N/A, there is no multimedia content on this page

FAA Section 508 Frequently Asked Questions

Video and Multimedia

If I conduct training and use multimedia, such as videotapes or computer based training, must the materials developed be accessible under 508?

Answer: Yes. Multimedia is considered EIT and, if used by the Federal government, must be accessible unless an exception applies (see sections F and G, below). Section 1194.22 of the Access Board's standards addresses requirements for web-based intranet and internet information and applications. Section 1194.24 addresses video and multimedia products. In addition to the requirements of section 508, agencies also have obligations to their employees under sections 501 and 504 of the Rehabilitation Act. --- FAQ from Section508.gov ---

If an instructor uses slides from presentation software, such as Microsoft PowerPoint or Corel Presentations, which are projected to a live class, do the Access Board standards apply?

Answer: Generally, no. However, if the slides contain embedded multimedia elements, such as videos, then the Access Board standards apply to this live presentation. As a reminder, the software used to create and playback the slideshow must meet the requirements of Section 1194.21, software applications and operating systems. Similarly, the projection equipment including the presenter's remote must meet the requirements of Section 1194.25, self contained, closed products.

Regardless of whether the Access Board standards apply, agencies still have obligations to their employees under Sections 501 and 504 of the Rehabilitation Act. As an example of reasonable accommodation, an instructor may have to read the contents of the slides, or audio describe visual elements of the slides to class members with visual disabilities.

Does presentation equipment procured have to meet the Access Board standards?

Answer: Yes. Presentation equipment, such as LCD data projectors and laptop computers, are considered EIT and therefore covered by the Access Board's standards, unless an exception applies. If the equipment was procured after June 21, 2001, and an exception does not apply, the action would be enforceable under Section 508(f). See sections G and H for more details.

If an agency has a system in place for broadcasting streaming video, is it required to replace it with a system that meets the standards when the next lifecycle upgrade occurs?

Answer: Generally, no. However, if the slides contain embedded multimedia elements, such as videos, then the Access Board standards apply to this live presentation. As a reminder, the software used to create and playback the slideshow must meet the requirements of Section 1194.21, software applications and operating systems. Similarly, the projection equipment including the presenter's remote must meet the requirements of Section 1194.25, self contained, closed products.

Do I need captioning if my targeted audience does not need captioning?

Answer: Yes, the EIT Accessibility Standards state "...Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation...". At present this method is captioning.

If a Federal agency is distributing a television or multimedia production or a web-cast presentation, does it have to be open or closed captioned and audio-described?

Answer: Section 1194.24(c) and (d) of the Access Board's standards require that all training or informational video and multimedia productions which support the agency's mission and which have audio information or visual information that is necessary for the comprehension of the content, be captioned or audio described. Hence, if the production is multimedia (e.g. image and sound) and is considered "training or informational," then it must meet the applicable requirements of 1194.24 (c) and (d) of the Access Board's standards. If the production is web-based, regardless of whether it is multimedia, such as a live webcast of a speech, then it must also meet the applicable requirements of 1194.22. --- FAQ fromSection508.gov ---

Does the requirement to open or close caption and audio describe apply to productions that have a limited purpose, scope, and shelf life or contain quickly

Answer: Section 1194.22 of the Access Board standards applies requirements to web-based intranet and internet information and applications without regard to the perishable nature of a production. Similarly, section 1194.24 addresses video and multimedia products without regard to the shelf life of a production. --- FAQ from Section508.gov ---

Guideline (c): Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.

Rationale

This provision is applicable to all Web content that contains color to convey information.

Color is useful in conveying important information. But when you use color alone, by saying, for example, “Please click the green button,” you are excluding those individuals viewing the web page who have difficulty or cannot distinguish colors. Instead, you should put text (e.g., “OK”) on the button and say, “Please click the green OK button.”

One common use of color being the sole conveyor of information is to highlight items in a list with text color, for example, “the overdue items are in reds,” “the listings in green are available.” These examples are not allowed by 1194.22 © because individuals who have low vision, and especially those who are color blind will not be able to correctly use or interact with the web content.

FAA Section 508 Web Accessibility Guidelines

Color

Web pages should not depend on color for information or navigation of a web page.

Issues

- A. Users of low vision or who is colorblind may not be able to correctly read text of certain font sizes or color (i.e. normal red text).
- B. Web pages that use color to refer to navigation or controls button (i.e. click on the red button).
- C. Web pages that may have background and foreground colors that are too close in contrast.

How to Test

- A. Check the web page using a monochrome monitor or printing the page with the setting to gray scale.
- B. Check the page using a high contrast setting such as white on black.

FAA Section 508 Self Check

Color

Are you able to navigate or understand the page without the use of color?

- a. ☐ Yes
- b. ☐ No

FAA Section 508 Frequently Asked Questions

Color

1. What is wrong with green text?

Answer: or users that cannot interpret the color green as green this presents a problem in trying to read text. The color green is seen as yellow text. This is especially difficult to view on a page with white or low contrasting background. As example, **Green text looks likes Yellow text and is hard to view.**

2. Is there a free tool for checking color accessibility for web pages?

Answer: Visccheck has a free tool at its' web site that check for 3 major categories of color blindness. You can download a program (JAVA) or test for red/green color blindness from their online tester. Go to: **Vischeck color tool**

3. What is wrong with red text?

Answer: Same problem as above except that red text looks like grey text. As an example, **Red text looks** likes Gray text and is hard to view. This is why if you use red text then make it bold.

Guideline (d): Documents shall be organized so they are readable without requiring an associated style sheet.

Rationale

This provision applies to all web content where style sheets are used.

Style sheets can be useful for individuals with disabilities, individuals with low vision in particular. A user can, for example, specify a user style sheet in Internet Explorer, or Opera, that makes the fonts very large and changes the color scheme to high contrast yellow on black.

If a web page is not readable with style sheets turned off, it may not be readable with user style sheets. In such situations, web masters and web developers affect the way individuals with disabilities can use the site. Because CSS is not supported in some older browsers it will be as if style sheets are turned off for users of those browsers.

FAA Section 508 Web Accessibility Guidelines

Style Sheets

Content on a web page must be layout so that the page is readable without a style sheet.

Issues

- A. A web page using a style sheet is not properly rendered when the style sheet is not used or not supported by a browser.
- B. Content on pages appears to be layered on top of each other.

How to Test

- A. Turn off style sheets in the browser.
- B. Put the style sheet on a separate page is test for proper reading.
- C. Check for absolute positioning instead of relative positioning.
- D. Check for accommodations for various browsers.

FAA Section 508 Self Check

Style Sheets

If the page has style sheets, is it viewable by a user's browser that does support style sheets

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this page does not have style sheets

Does the style sheet interfere with the style sheets set by the user's browser?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this page does not have style sheets

Guideline (e): Redundant text links shall be provided for each active region of a server-side image map.

Rationale

This provision applies to all web pages which include server-side image maps, that is image links (IMG inside A tag) with the attribute property ismap.

The idea of an image map is to have one image which has several different hot spots. A typical example would be a map of the United States with individual states or regions being the hot spots. A server-side image map works when the client, i.e., the browser, records the coordinates of a mouse click relative to the top left of the image and sends those coordinates to the server for it to decide what action to take.

The server-side image map is completely inaccessible to an individual who relies on the use of the keyboard to access FAA web sites. There is no reasonable way to move the mouse pointer with the keyboard to an arbitrary position on the image map. 1194.22 (e) provision requires equivalent text links, for the hot spots of a server-side image map.

FAA Section 508 Web Accessibility Guidelines

Image Maps

Server-side image maps must provide redundant text links for the image map hot spots, except when the regions cannot be defined with an available geometric shape.

Issues

Assistive technology devices cannot read server-side images because they are external to the HTML document.

How To Test

- A. Check code the 'alt' attribute in the and <AREA> tags.
- B. Check for 'usemap' (client-side) as opposed to 'ismap' (server-side) attributes.
- C. Verify that all links works
- D. If image cannot be compliant then check to make sure that is a test-only equivalent.

Example B: Server-side image map with redundant links

```
<a href="worldmap.map">  

```

```
</a>
<map name="worldmap">
<area shape="rect" coords="43,39,63,81" href="http://www.southamerica.com">
<area shape="rect" coords="22,9,49,36" href="http://www.northamerica.com">
<area shape="rect" coords="73,26,105,67" href="http://www.africa.com">
<area shape="rect" coords="131,51,156,70" href="http://www.australia.com">
<area shape="default" nohref>
</map>
<a href="http://www.northamerica.com" title="North America">North America</a> | <a
href="http://www.southamerica.com" title="South America">South America</a> | <a
href="http://www.africa.com" title="Africa">Africa</a> | <a href="http://www.australia.com"
title="Australia">Australia</a>
```

FAA Section 508 Self Check

Does your server-side image have duplicate text links for all links within the server-side image?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A. this page does not have server-side images

Do you have a timetable to replace your server-side images with client-side images?

- a. ☐ Yes, I will be changing to client-side images by:
- b. ☐ No
- c. ☐ N/A, this page does not have server-side images

Guideline (f): Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.

Rationale

This provision applies to all web pages which have image maps, that is images (IMG) with attribute `ismap` or `usemap`.

This provision 1194.22 (f) essentially says use client-side image maps instead of server-side image maps which are totally inaccessible to individuals who rely on a keyboard and screen reader technology to access FAA web sites.

Image maps must be client-side unless the regions cannot be defined with available geometric shapes. Three possible shapes are available for client-side image map hot spots: `rect` for rectangle, `circle` for circle and `poly` for polygon. Since the domain here is discrete and finite, measured in pixels, all regions are definable with polygons. Because all regions can be defined with a polygon, it follows that all image maps must be client-side image maps to conform with section 508 web provisions.

FAA Section 508 Web Accessibility Guidelines

Image Maps

Client-side image maps are to be used in place of server-side image maps, except when the regions cannot be defined with an available geometric shape.

Issues

Client-side image maps must provide equivalent text of the images including text links for all hot spots.

How to Test

- A. Check code the 'alt' attribute in the `` and `<AREA>` tags.
- B. Check for 'usemap' (client-side) as opposed to 'ismap' (server-side) attributes.
- C. Verify that all links works
- D. If image cannot be compliant then check to make sure that is a test-only equivalent.

Example A: Client-side image map with 'alt' and 'usemap' attributes.

```
<IMG src="world.gif" alt="Continents of the world" usemap="#map1">
```

```
<MAP name="map1">
```

```
<AREA shape="rect" coords="0,0,30,30" href="worldref.html" alt="Continent reference">
```

```
<AREA shape="rect" coords="34,34,100,100" href="capital.html" alt="Capital">
</MAP>
```

FAA Section 508 Self Check

Do your client-side images use the "alt" attribute to provide text equivalent description and/or an alternative method to provide text equivalent description?

- a. ☐ Yes
- b. ☐ Yes/No, some non-text elements have text equivalents but not all
- c. ☐ No
- d. ☐ N/A, this page does not have client-side images

Guideline (g): Row and column headers shall be identified for data tables.

Rationale

This provision applies to all instances of tabular data on Web pages

This provision is relating to the use of data tables, not layout tables. Data tables are tables on a FAA web site (the TABLE element) in which the position of data in the table carries important information. The purpose of this provision is to ensure that additional tabular information is also available to users of assistive technology.

If row and column headers are identified as required by this provision, then a screen reader or talking browser can announce those headers as the table is spoken in “table reading mode.” Without this information being available to assistive technology, the information given by the table is not accessible. Complying with this provision becomes a question of which method should be used to identify the headers.

Guideline (h): Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.

Rationale

This provision applies to all instances of tabular data on Web pages

As with the previous provision 1194.22 (g), complying with this provision becomes a questions of which method should be used to identify the headers. 1194.22 (h) is talking about tables with “two or more logical levels of row or column headers.” This relates to having headers identified as not being enough, otherwise the provision would not be necessary.

In order for a table to be accessible to individuals using screen reader technology there must be markup on each data cell that specifies which cells are header cells. That markup is the `headers` attribute.

FAA Section 508 Web Accessibility Guidelines

Tables

Tables are to be constructed so that all users can interpret the original intent of the author. Row and column headers must be identified for data tables. Associate data cells with their headers for all tables that have two or more logical levels of row or column headers.

Issues

- A. Tables need to be properly mark-up'ped using HTML 4.x or higher coding standards.
- B. Tabular tables need to be summarized to convey information an overview of the table's content.
- C. Current assistive technology devices do not adequately read HTML 4.x code but future versions will be designed to table tags and attributes.

How to Test

- A. Check for 'summary' attribute in the Table tag. The 'summary' tag is only visible to the assistive technology device and not the visual user.
- B. Check for the Caption tag, this is optional but does provide a title to the table.
- C. Check for the headers and id attributes.
- D. If the headers and id attributes are not used then check for the 'scope' attribute and the 'row' and 'col' elements.

(Example B is the easiest to implement)

- E. If you are using a complex table then use the 'axis' attribute. The 'axis' attribute can only be used with the 'id' and 'headers' attributes. It will not work with the 'scope' attribute. See example C below.

Example A: Headers and id attributes

Travel Expenses

Days	Food	Hotel	Mileage	Miscellaneous
JANUARY 23	\$30.00	\$75.00	\$100.00	\$15.00
JANUARY 24	\$55.00	\$75.00	\$80.00	\$23.00
JANUARY 25	\$47.00	\$65.00	\$200.00	\$34.00
JANUARY 26	\$57.00	\$90.00	\$150.00	\$27.00

Example A Code: Headers and id attributes

```
<TABLE WIDTH="66%" BORDER="1" SUMMARY="This table summarizes my travel expenses.">
```

```
<CAPTION>Travel Expenses</CAPTION>
```

```
<TR>
```

```
<TH ID="H1">Days</TH>
```

```
<TH ID="H2">Food</TH>
```

```
<TH ID="H3">Hotel</TH>
```

```
<TH ID="H4">Mileage</TH>
```

```
<TH ID="H5">Miscellaneous</TH>
```

```
</TR><TR>
```

```
<TD ID="R1"><CENTER>JANUARY 23</CENTER></TD>
```



```

<TD HEADERS="R1 H2"><CENTER>$30.00</CENTER></TD>
<TD HEADERS="R1 H3"><CENTER>$75.00</CENTER></TD>
<TD HEADERS="R1 H4"><CENTER>$100.00</CENTER></TD>
<TD HEADERS="R1 H5"><CENTER>$15.00</CENTER></TD>
</TR><TR>
<TD ID="R2"><CENTER>JANUARY 24</CENTER></TD>
<TD HEADERS="R2 H2"><CENTER>$55.00</CENTER></TD>
<TD HEADERS="R2 H3"><CENTER>$75.00</CENTER></TD>
<TD HEADERS="R2 H4"><CENTER>$80.00</CENTER></TD>
<TD HEADERS="R2 H5"><CENTER>$23.00</CENTER></TD>
</TR><TR>
<TD ID="R3"><CENTER>JANUARY 25</CENTER></TD>
<TD HEADERS=" R3 H2"><CENTER>$47.00</CENTER></TD>
<TD HEADERS=" R3 H3"><CENTER>$65.00</CENTER></TD>
<TD HEADERS=" R3 H4"><CENTER>$200.00</CENTER></TD>
<TD HEADERS=" R3 H5"><CENTER>$34.00</CENTER></TD>
</TR><TR>
<TD ID=" R4"><CENTER>JANUARY 26</CENTER></TD>
<TD HEADERS="R4 H2"><CENTER>$57.00</CENTER></TD>
<TD HEADERS=" R4 H3"><CENTER>$90.00</CENTER></TD>
<TD HEADERS=" R4 H4"><CENTER>$150.00</CENTER></TD>
<TD HEADERS=" R4 H5"><CENTER>$27.00</CENTER></TD>
</TR>
</TABLE>

```

Example B: Scope attribute with 'row' and 'col'

Travel Expenses

Days	Food	Hotel	Mileage	Miscellaneous
JANUARY 23	\$30.00	\$75.00	\$100.00	\$15.00
JANUARY 24	\$55.00	\$75.00	\$80.00	\$23.00
JANUARY 25	\$47.00	\$65.00	\$200.00	\$34.00
JANUARY 26	\$57.00	\$90.00	\$150.00	\$27.00

Example B Code: Scope attribute with 'row' and 'col'

```

<TABLE WIDTH="66%" BORDER="1" SUMMARY="This table summarizes my travel
expenses.">
<CAPTION><b>Travel Expenses</b></CAPTION>
<TR>
<TH SCOPE="COL">Days</TH>
<TH SCOPE="COL">Food</TH>

```

```

<TH SCOPE="COL ">Hotel</TH>
<TH SCOPE="COL ">Mileage</TH>
<TH SCOPE="COL ">Miscellaneous</TH>
</TR><TR>
<TD SCOPE="ROW"><CENTER>JANUARY 23</CENTER></TD>
<TD><CENTER>$30.00</CENTER></TD>
<TD><CENTER>$75.00</CENTER></TD>
<TD><CENTER>$100.00</CENTER></TD>
<TD><CENTER>$15.00</CENTER></TD>
</TR><TR>
<TD SCOPE="ROW"><CENTER>JANUARY 24</CENTER></TD>
<TD><CENTER>$55.00</CENTER></TD>
<TD><CENTER>$75.00</CENTER></TD>
<TD><CENTER>$80.00</CENTER></TD>
<TD><CENTER>$23.00</CENTER></TD>
</TR><TR>
<TD><CENTER>JANUARY 25</CENTER></TD>
<TD><CENTER>$47.00</CENTER></TD>
<TD><CENTER>$65.00</CENTER></TD>
<TD><CENTER>$200.00</CENTER></TD>
<TD><CENTER>$34.00</CENTER></TD>
</TR><TR>
<TD SCOPE="ROW"><CENTER>JANUARY 26</CENTER></TD>
<TD><CENTER>$57.00</CENTER></TD>
<TD><CENTER>$90.00</CENTER></TD>
<TD><CENTER>$150.00</CENTER></TD>
<TD><CENTER>$27.00</CENTER></TD>
</TR>
</TABLE>

```

FAA Section 508 Self Check

TABLES

If you use tables for design layout have you check to see if the tables are linearized?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, I do not use tables for design layout

Do your tabular tables use the 'summary' attribute and/or tag?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, I do not use tabular tables

Does each table cell provide identification of row and column headers?

- a. ___ Yes
- b. ___ No
- c. ___ N/A, this page does not use tables

FAA Section 508 Frequently Asked Questions

Tables

1. I can't get the 'axis' attribute to work with the 'scope' attribute?

Answer: The 'axis' attribute only works with the 'id' and 'headers' attribute.

2. I see that other agencies are using the summary attribute for every tables including ones for design layout. Why don't the guidelines require the summary attribute for design layout tables?

Answer: You will need to look at the Access Board EIT Web Accessibility Standards, <http://www.access-board.gov/sec508/508standards.htm>, and the Notice of Proposed Rulemaking, <http://www.access-board.gov/sec508/nprm.htm>, to see why we came to our conclusion. As a summary, the standards refer to 1194.23(c)(8-9) of the NPRM which left intact the comments by the WAI. In looking at those comments and looking at the WCAG 1.0 guides, you will notice that in checkpoint 5.4 of the WCAG 1.0 it says "If a table is used for layout, do not use any structural markup for the purpose of visual formatting".

If a web page has the proper layout, then a screen reader will not read the summary attribute for non-tabular tables. If a table does not have the proper layout then you will need to add a summary attribute to notify the user, who is using an assistive technology device, that the table is for format purposes. The reason for this is that the user is expecting a tabular table and may try to navigate the table.

3. Why do you require the CAPTION tag for data tables?

Answer: The CAPTION tag allows you to associate the title of the table to the table.

The reader will say the following:

Table has x amount of row by x amount of columns.

Summary: summary of table

Title of the tables

Table contents

This allows everything to be associated within the TABLE tag.

If you leave out the CAPTION tag then the table association will leave out the title of the table.

4. Why can't I use scope and axis together?

Answer: From the W3C as to what elements are supported under the SCOPE attribute:

scope = scope-name [CI]

This attribute specifies the set of data cells for which the current header cell provides header information. This attribute may be used in place of the headers attribute, particularly for simple tables. When specified, this attribute must have one of the

following values:

row: The current cell provides header information for the rest of the row that contains it (see also the section on table directionality).

col: The current cell provides header information for the rest of the column that contains it.

rowgroup: The header cell provides header information for the rest of the row group that contains it.

colgroup: The header cell provides header information for the rest of the column group that contains it.

5. The Access-Board EIT Web Accessibility Standards do not require the summary attribute for tabular tables, why do the guidelines require it for tables?

Answer: The summary is only required for tabular tables. A visual user can look at a table and summarize what the table is about; a user of an assistive technology device cannot immediately get that information. The summary attribute will allow the user to get that information and decide to read or skip the table. This attribute is easy to incorporate and is in the spirit of Section 508 and intent of the Access-Board EIT Web Accessibility Standards.

FAA Section 508 Quick Web Reference

TABLES

Use the following:

1. Scope attribute for simple tables with "row" and "col"
2. Headers, id, and axis for complex tables
3. Use the <CAPTION> tag to title the table
4. Use a the "summary" attribute for all tables:
 - a. Summarize information being presented in a data table
 - b. Tables for layout use "This table for page design layout"

Simple Table

```
<table summary="This table displays if a web site is compliant or not">
```

```
<CAPTION>Web Site Compliancy</CAPTION>
```

```
<tr>
```

```
  <th scope="col">Web site</th>
```

```
  <th scope="col">Compliant</th>
```

```
  <th scope="col">Date Reviewed</th>
```

```
</tr>
```

```
<tr>
```

```
  <td scope="row">Site1</td>
```

```
  <td>Yes</td>
```

```
  <td>August 20, 2001</td>
```

```
</tr>
```

```
<tr>
```

```
  <td scope="row">Site2</td>
```

```
  <td>Yes</td>
```

```
<td>November 13, 2001</td>
</tr>
</table>
```

Guideline (i): Frames shall be titled with text that facilitates frame identification and navigation

Rationale

This provision applies to any Web page implemented with frames.

When this provision talks about “titles” of frames to facilitate navigation, it is referring to the text that appears in lists generated by screen reader technology to identify the list of frames on a web site.

JAWS uses the name attribute in its list of frames because this attribute is usually available even if it does not facilitate frame identification and navigation as required by this provision.

FAA Section 508 Web Accessibility Guidelines

Frames

Frameset should not require the user to be dependent upon visual cues to navigate the site. Frames must be titled for frame identification and navigation.

Issues

A. Frames need meaningful descriptive text for navigation. Include the Name attribute since since assistive technology devices may or may read the Title attribute. Some assistive technology device default to the Src attribute if the Name attribute is missing.

How to Test

A. Check for 'title' attribute and tag with descriptive text for each frame. The Name attribute requires meaningful text for navigation but not as descriptive as the Title attribute.

Example:

```
<HTML>
<HEAD> <TITLE>Company Listings</TITLE>
</HEAD>
<FRAMESET cols="10%, 90%" title="Company listing of products">
  <FRAME src="comp_header.htm" name="company header" title="Header for Company">
  <FRAME src="left_nav.htm" name="left navigation" title="Left navigation links">
  <FRAME src="main_page.htm" main="main content" title="Main product listings">

  <NOFRAMES> <A href="main_page2.htm" title="Product listings">
```

```
        Your browser doesn't support frames and you can go to alternative page.</A>
    </NOFRAMES>
</FRAMESET>
</HTML>
```

FAA Section 508 Self Check

FRAMES

Does each frame use the "title" attribute to properly describe the frame?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this page does not contain frames

FAA Section 508 Frequently Asked Questions

Frames

1. Then what is the purpose of the Name attribute?
Answer: The name attribute can be used as a target reference.
2. What is the purpose of the Title attribute?
Answer: The Title attribute is used to provide descriptive text for a frame.
3. The EIT Web Accessibility Standards, indicates that I only need to use the Title attribute. Why do I need anything else?
Answer: Yes, that is true but you will still need to use proper coding techniques. You need to be aware that screen readers will read the Name attribute first.
4. I used a software tool that corrected my Frame code. I notice that it left out the Name attribute and replaced it with the Title attribute. Now my screen reader is reading the 'src= ' information.
Answer: The reason is that the screen reader will default to read the Name attribute first. If the Name attribute is missing it will read the 'src= ' information. Add the Name attribute to your code and you will see that everything is correct. Future versions of the screen reader will read the Title attribute.
5. Is there a way to get a list of the frames?
Answer: In JAWS press INS+F9
6. Do I need a 'skip link' for frames?
Answer: No, a user with assistive technology will be able to navigate frames and bypass any repetitive links.

FAA Section 508 Quick Reference

FRAMES

Provide descriptive text for frames.

```
<FRAMESET cols="10%, 90%" title="Company listing of products">  
  <FRAME src="" name="" title="Company header">  
  <FRAME src="" name="" title="Left navigational links">  
  <FRAME src="" name="" title="Main content area">  
  <NOFRAMES>  
    You browser doesn't support frames, you can view information on <a  
href="main_page.htm" title="Company home page">alternative page</a>  
  </NOFRAMES>  
</FRAMESET>
```

Guideline (j): Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.

Rationale

This provision applies to any web content that contains flashing, blinking or flickering elements or information.

Rapid visual changes, flashes, or blinking objects displayed on the computer can cause photosensitive epileptic seizures in susceptible individuals. This is particularly true when flashing has a high intensity and is in the frequency range between 2 Hz and 55 Hz.

An image that fades to black in 1 second (using 20 frames) and then fades back would not be flickering. If it went from dark to light suddenly, it would be a flick. A series of rapid transitions would be a flicker. And the flicker rate is the number of transitions per second.

It only takes a few cycles to trigger a seizure. So the ability to use the escape key to stop a flicker (as with animated gifs with Internet Explorer) is not sufficient solution for this problem.

FAA Section 508 Web Accessibility Guidelines

Navigation and Design

Design pages that do not cause screen flicker or blink a frequency between 2 HZ (2 times per second) and 55 Hz (55 times per second).

Issues

Screen flicker on web pages, within certain frequencies, can cause fatigue and seizure.

How to Test

Look for screen flicker and blinking animated gifs.

FAA Section 508 Self Check

Does the include content, such as applets, plug-ins, or animation, cause the screen to flicker with a frequency greater than 2 Hz or less than 55 Hz?

- a. ☐ Yes
- b. ☐ No

Guideline (k): A text-only page, with equivalent information or functionality, shall be provided to make a Web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.

Rationale

This provision applies to web pages that cannot be made to comply with the other 1194.22 provisions.

There may be times when a web page cannot be made accessible. In these cases, a text-only page (one whose only content is text) must be provided and kept current. Separate text only pages may not be updated when the primary pages are changed. There fore, this provision specifically addresses “the text-only page shall be updated whenever the primary page changes.”

The text-only page must contain all the same information, and the same functionality in the sense of links amongst pages and user interactions (forms).

FAA Section 508 Web Accessibility Guidelines

Navigation and Design

If a web page cannot be compliant, then provide a text-only page that is equivalent and updated when the non-compliant page is updated.

Issues

Text-only page is costly to maintain and should be considered as a last measured only if you cannot make a page compliant.

How to Test

Verified that text-only page has equivalent information, as original page, and the text-only page is accessible

FAA Section 508 Self Check

If this page cannot be made accessible, do you have a 'text only' version that is updated the same time the inaccessible page is updated?

- a. ☐ Yes
- b. ☐ No

c. ____ N/A, this page is accessible

FAA Section 508 Frequently Asked Questions

1. I have 'text only' pages for my web site, do I need to make my non-text only page compliant?

Answer: Yes, you do. The Access Board EIT Web Accessibility Standards, 1194.22(k) states the following:

Paragraph (k) requires that a text-only web page shall only be provided as a last resort method for bringing a web site into compliance with the other requirements in §1194.22. Text-only pages must contain equivalent information or functionality as the primary pages. Also, the text-only page shall be updated whenever the primary page changes. This provision is meant to be consistent with WCAG 1.0 Checkpoint 11.4 which provides that "if, after best efforts, you cannot create an accessible page, provide a link to an alternative page that uses W3C technologies, is accessible, has equivalent information (or functionality), and is updated as often as the inaccessible (original) page."

Guideline (l): When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by assistive technology.

Rationale

This provision applies to any Web page that contains scripting.

This provision is interpreted as requiring all aspects of scripting, including initiation of scripts and results of scripts be accessible. All the issues of accessibility of web content apply to these scripts. This provision requires that the script produce “functional” text, text that is available to assistive technology.

One of the most common inaccessible scripting techniques is using the onChange event on select menus for form submission. If you use that, the menu will not be keyboard accessible because the form submits as soon as the keyboard user arrows down in the menu.

Guideline (m): When a Web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with § 1194.21(a) through (l).

Rationale

This provision applies to Web pages that include any non-HTML media which require add-on software (plug-ins) to be displayed (or played) and to all specialized applications (applets) launched from the page.

This provision is asking for two things. First, when a web page provides information using an applet or plug-in, a link must be available to get the applet or plug-in. Second, the applet or plug-in that is used must be accessible, that is comply with Section 508 provisions 1194.21 (a-l). In order for the user to have a seamless user experience using assistive technology, the link has to be present and available, and the applet and plug-in have to be compliant with 1194.21 (a-l) provisions.

This provision places a responsibility on the web page developer to know that a compliant application exists, before requiring a plug-in. The most obvious issues that arise for plug-ins and applets are keyboard access and the issues for screen readers and screen magnifiers, namely knowing which objects has focus and what its role is.

For many individuals with disabilities, keyboard access is a crucial ingredient. When applets or plug-ins have active controls and are rendered in the web page, it is usually difficult or impossible to give focus to those controls so the software’s interaction becomes inaccessible.

FAA Section 508 Web Accessibility Guidelines

Pages utilizing scripting languages to display content or to create interface elements must provide meaningful text that can be read by assistive technology. If meaningful text cannot be rendered then the page must provide an equivalent alternative.

A link to a plug-in or applet that complies with §1194.21 (Software Applications and Operating Systems) must be present when a component of a web page requires an applet, plug-in or other application to be present.

5.1 Issues

- A. Assistive technology devices may not support scripts, applets or plug-ins causing the assistive technology device to not convey meaningful information to the user.
- B. Plug-ins or applications may not be accessible to assistive technology devices; see §1194.21 (Software Applications and Operating Systems).
- C. If a script, applet, plug-in, or application cannot be compliant then provide a text-only page that is updated when the original content is updated.

5.2 How to Test

- A. Use an assistive technology device to check scripts for equivalent content.
- B. Check to see if <applets> or <OBJECT> have an 'alt' attribute to provide equivalent information.
- C. Provide a direct link to the most current plug-in for download.
- D. Use an assistive technology device to check an application for equivalent content.

FAA Section 508 Self Check

SCRIPTS, PLUG-INS, APPLETS

If the page uses scripts, is the script accessible to the screen reader or is there equivalent text provided?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this page does not use scripts

Do your applets, such as JAVA applet, contained the same information and functionality in an accessible format?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A. this page does not use applets

If you use a plug-in, such Flash, Windows Media, Real Audio, etc, have you provide a link to download the plug-in and is the plug-in, itself, accessible to people with disabilities?

- a. ☐ Yes

- b. ☐ No
- c. ☐ N/A, this page does not use plug-ins

If you require a plug-in, does the plug-in comply with Section 508, 1194.21 (Software Applications and Operating Systems)?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this page does not use plug-ins

If you have a application, such as a JAVA application, is it accessible or there is an alternative that contains the same information and functionality in an accessible format?



- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this page does not use applications

FAA Section 508 Quick Web Reference

PLUG-INS and Viewers

Provide a direct link to download plug-ins and viewers.

List of Plug-ins and Viewers web addresses:

1. **Error!**  **Window Media:**
<http://www.microsoft.com/windows/windowsmedia/en/default.asp>
2.  **Real Player:** <http://www.real.com/player/index.html>
3. **Quicktime:** <http://www.apple.com/quicktime/download>
4. **Flash Player:**
http://www.macromedia.com/shockwave/download/index.cgi?P1_Prod_version=ShockwaveFlash
5.  **Shockwave:** <http://sdc.shockwave.com/shockwave/download>
6. **Zip files:** <http://www.winzip.com>
7.  **Adobe Acrobat Reader:**
<http://www.adobe.com/products/acrobat/alternate.html>
8. **MS-Word:** <http://office.microsoft.com/downloads/2000/wdvw9716.aspx>
9.  **MS-Excel:** <http://office.microsoft.com/downloads/2000/xlviewer.aspx>

10. **MS-PowerPoint:**
 <http://office.microsoft.com/downloads/2000/Ppview97.aspx>

JAVA APPLETS

Provide descriptive text for applets.

```
<APPLET name="" codebase="" code="" width="" height="" archive="" alt="Go to news links  
for information in this applet">  
  <param name="" value="">  
  <param name="" value="">  
</APPLET>
```

Guideline (n): When electronic forms are designed to be completed on-line, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.

Rationale

This provision applies to all forms (the FORM element) on web pages.

This provision requires that forms be made accessible for individuals using assistive technology, leaving the techniques to the web master who creates the form on the web. The issue for form accessibility primarily concerns the availability of prompts or labels of the form elements. When a screen reader or talking browser encounters an input element, it will be able to inform its user of the nature or role of the control, is it an edit field, a combo-box (select menu) or a radio button. This information is readily available and is not the problem.

The problem is, when encountering an input element, what is its purpose? Is this edit box where I type my name, my email address or my password? Obviously these are crucial issues and they are prevalent on the Web. This provision is included to ensure that such frustrating questions are not part of any Section 508 compliant web experience.

FAA Section 508 Web Accessibility Guidelines

Forms

Forms that are to be completed on-line, the form must allow assistive technologies to take direction and cues from the form's information and field elements completion and submission of the form.

2.1 Issues:

- A. Forms must provide adequate information and purpose to fill out the form.
- B. Form fields must be accessible and navigable through the form.
- C. If a form has a 'timed out' feature it must notify the user and allow adequate time for the user to request additional time.

2.2 How to Test

- A. Check for adequate information for a user to complete the form.
- B. Check for proper tab order. The tabbing order is to be through the form first then natural order tabbing.
- C. Check for proper form markup so that forms can interpret the form fields correctly.

Below is a list 'tags' and 'attribute' that should be associated with form fills.

1. <Label></Label>: associating descriptive text to an input field
2. 'tabindex': used with <Input> to set tab order.

3. 'id': used to associate the <Input> with the <Label></Label>

Labels are to be associated the following form elements:

1. <Input type="Text">
2. <Input type="Radio">
3. <Input type="check">
4. <Textarea rows="1" cols="20"></Textarea>
5. <Select> </select>

'Tabindex' are to be associated with the following form elements:

1. <Input type="Text">
2. <Input type="Radio">
3. <Input type="check">
4. <Textarea rows="1" cols="20"></Textarea>
5. <Select> ('tabindex' is not supported in the <Option> element) </select>

Examples:

Input Text:

```
<Label for="fname">First Name</Label>
<Input tabindex="1" type="text" name="Name" id="fname" size=30 maxlength=75>
```

Radio button

```
<Input tabindex="2" type="radio" name="fruit" id="apl" size=50 maxlength=75>
<LABEL for="apl">Apple </Label>
```

Check box

```
<Input tabindex="3" type="checkbox" name="yes_no" id="ybox1" size=50 maxlength=75>
<LABEL for="ybox">Yes </Label>
```

Combo box

```
<LABEL for="catg">Categories</Label>
<Select tabindex="4" type="radio" name="category" id="catg"> </select>
  <Option>Insects</Option>
  <Option>Animals</Option>
  <Option>Plants</Option>
  <Option>Birds</Option>
</select>
```

Text area

```
<LABEL for="note">Feedback </Label>
<Textarea tabindex="5" type="radio" name="comment" id="note" row="4" column="50"
rows="1" cols="20">
```

Submit:

```
<input tabindex="6" type="submit" name="Submit Button">
```


Reset:

```
<input tabindex="7" type="reset" name="Reset Button">
```

Do not use 'implicit' labeling (see FAQ)

```
<LABEL>First Name:
```

```
<INPUT type="text" name="fn" size=20>
```

```
</LABEL>
```

FAA Section 508 Self Check

FORMS

Do all form fields have a <LABEL> tag

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this pages does not use form fields

8. Do all form fields have a tabindex attribute?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this pages does not use form fields

Do your forms field allow a person using assistive technology to access information, field elements, and functionality for completion and submission of the form including all directions and cues?

- a. ☐ Yes
- b. ☐ Yes, but... is complete but not tested for usability using assistive technology
- c. ☐ Yes, but... form has been tested but are not sure it complies with all the accessibility requirements
- d. ☐ No
- e. ☐ N/A, this page does not use form fields

If your form field are inaccessible to people with disabilities is there an alternative accessible form or a link to an accessible form?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this page does not use form fields

Forms

1. Can I use the same <label> tag for more than one form field?

Answer: Yes you can but want to make sure that the user understands the distinction between the form fields. For example, there are two search form fields. One is the standard edit box and the other is a combo (drop down) box. When using the screenreader, JAWS will say 'Search edit box' when you tab to the edit box and 'Search

combo box' when you tab to the combo box. A user can be aware that both are search fields but do different things.

2. Do I need the <label> tag to be right next to the form field?

Answer: No, the <label> tag can be anywhere on the page. The 'for=' is a pointer that is reference by the 'id' attribute.

3. I used an image between the <label> tags with the 'alt' attribute stating the text in the image. When I use JAWS to read my form field it only says 'Edit box' or 'Combo box'?

Answer: JAWS cannot read the 'alt' attribute within the image between the <LABEL> tags. This does not mean your page is not compliant, if the image is next to the form field then the user will use JAWS virtual cursor mode to do the association. It is important that proper labeling and web design is maintained.

4. What is the purpose of the <label>tag?

Answer: The label tag associates the text between the tags <label></label> to an input box. A screen reader reads each HTML tag and reads back the information back to the user.

FAA Section 508 Quick Web Reference

FORMS

Use the <LABEL> tag with all form fields except Submit and Reset

<LABEL for="fname_id">Name: </LABEL>

<INPUT tabindex="1" id="name_id" type="text" name="fname" size="20" maxlength="35">

<LABEL for="state_id">State: </LABEL>

<SELECT tabindex="2" id="state_id" name="state">

<option>Virginia</option>

<option>Maryland</option>

<option>District of Columbia</option>

Guideline (o): A method shall be provided that permits users to skip repetitive navigation links.

Rationale

This provision applies to all Web pages that have several navigation links before the main content.

When a Web page is read with a screen reader or talking browser the speaking starts at the top and reads left to right and top to bottom. When layout tables are encountered, the table cells each cell is completed before the next is read.

When you are able to look at a page, it is relatively easy to focus on the “Main Content” and ignore those links at the top or down the side. The same is not true if you are using a screen reader or talking browser. The problem happens on most pages of the site because the navigation links are repeated. The blind user has to wade through all those navigation links again and again to try to find what they came to look at in the first place.

This provision directs web masters and web developers to provide a programmatic way of jumping from the top of the page to the beginning of the main content.

FAA Section 508 Web Accessibility Guidelines

Navigation and Design

Provide a method that will allow users of assistive technology devices the option to skip repetitive links.

Issues

Repetitive links can be confusing and irritating to a user using an assistive technology device when going from page to page.

How to Test

Check for a pixel, transparent, gif or text link to allow the user of an assistive technology device to move to the main content of the page.

FAA Section 508 Self Check

Do your pages provide a method for assistive technology to skip repetitive links including navigational links?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A, this page does not need navigational or repetitive links

FAA Section 508 Frequently Asked Questions

2. What is the 'skip link'?

Answer: The 'skip link' is a link that's usually located at the top of the page or after the logo that goes to the main content of the page. This allows the users, of assistive technology devices, to either jump pass repetitive links (i.e. navigational links) to the main content of the page or to go through the navigational links.

3. How do you implement a 'skip link'?

Answer: Code implementation is very easy with a 1 pixel transparent GIF:
Origin: `<IMG SRC='/images/1pixel.GIF' WIDTH='1'
HEIGHT='0' BORDER='0' ALT='Skip to main content'>`
Destination: `<`

FAA Section 508 Quick Web Reference

SKIP LINK

Provide a link, the first link on the page, that skips over navigational links to the main content of the page.

First or Second link on page:

1. ``
2. or `Skip to main content`

At beginning of page's main content:

``

The 'skip link' can be a 1 pixel image link or a text link. We suggest the 1 pixel image because it has a cleaner look to the page.

Avoid the following:

1. Multiple references (links) to the main content of the page.
2. Using in Frames; Reason: Assistive technology can navigate to the main content of the page by a Frames list.

Guideline (p): When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

This provision applies to any web page that requires a user response within a certain amount of time.

Individuals who use screen reader or screen magnification technology may be two to three times slower in completing tasks on the web than those without disabilities. Some people with mobility disabilities may depend on keyboard access, or access with on-screen keyboards, and that may significantly slow down the process. This provision requires that users be informed that a timed response is required and that they be given sufficient time, and provided the opportunity to say that more time is required.

FAA Section 508 Self Check

If your page requires a fixed time for response but the page 'times out', is the user alerted that he or she would be timed out and given sufficient time to indicate that more time is needed before being 'timed out'?

- a. ☐ Yes
- b. ☐ No
- c. ☐ N/A. this page does not have a 'time out' feature

Part 4: Checking FAA Web Pages for Accessibility

Viewing FAA Web Pages Without Images

To view what a screen reader user would hear, or what a non-graphical browser user would see, view web pages with images turned off. You can change Internet Explorer 5 and Netscape 4 settings so that FAA web pages are displayed without images. All of the meaningful graphics must have alt text which will appear in the image place holders.

To turn off images in Internet Explorer

- Go to Tools Menu, Select Internet Options Menu Option and then select Advanced button
- In “Accessibility” check “Always expand alt text for images”
- In “Multimedia” check “Show image download placeholders”
- In “Multimedia” uncheck “Show pictures”
- Use the “Restore Defaults” button on the Advanced page when you want to return to viewing images.

To turn off images in Netscape

- Go to Edit Menu, Select Preferences Menu Option and then select Advanced button
- Uncheck “Automatically load images”
- Clear memory cache and clear disk cache in Edit Menu/Preferences Menu Option /Advanced/Cache to see recently viewed pages without images
- Reverse the procedure when you want to return to viewing images

Online Training: Using Opera 6.0 for testing

Opera 6.0 can allow you to check for possible Section 508 violations that are not checked by the Section 508 compliance checking tools such as PagesScreamer, InFocus, and ACCverify. You can download Opera 6.0 for free at: <http://www.opera.com/download/>.

Opera can check the following items for you:

Verify meaningful Alt tag text for images
Verify Style Sheets
Check to see if your tables are linearized
JavaScript functionality check

Other issues not related to Section 508 are:

Frames Disabled
Testing
Verify meaningful ALT tag text for images

On the tool bar is an image of a camera. This button allows you to toggle images on and off revealing the text embedded in the image. With the images turned off you can verify that each image provides a meaningful text of the image. This will allow you to check for text such as

"spacer.gif" which doesn't provide meaningful navigation to the web page.

The other option to turn off images is by:

Click on File
Click on Preferences
Click on Multimedia
Uncheck "Show Images"

Checking Style Sheets

On the bottom tool bar is an image of a sheet of paper with a folded left corner. This button allows you to toggle between the author and user stylesheets. If a user's stylesheet is not specified this causes the the author's stylesheet to be turned on and off.

The purpose of this test is:

check if a web page is viewable without a stylesheet
check if a user's stylesheet cannot be overwritten by the author's stylesheet

To see if a web page is viewable without a stylesheet, just click on the button with the image of a sheet of paper. Click the button again and stylesheet becomes active. The way to check the user's stylesheet is to do the following:

Click on File
Click on Preferences
Click on Page Style
Uncheck "My Style sheet" in the Author Mode section
Check "My Style sheet" in the User Mode section
In the "My Style sheet" edit field, type in or choose the location of the stylesheet that you want to test.

Checking table linearization

A visual user is able to view a web page and determine a sense of order on a web page. A user that is using a screen or Braille reader interrupts the structure of the page as well as the content of the page. If a page is not properly marked up then the screen or Braille reader may not interrupt the page as the author intended.

Opera browser allows the developer to view the page in a manner similar to the way a screen or Braille reader might interpret the page. Opera interprets how the page was marked up with tables and renders the content to the page without tables. This creates a page that is one column wide allowing the developer to read the information presented and check to see if it reads correctly.

To configure Opera to remove the tables from the page you must do the following:

Click on File
Click on Preferences
Click on Page Style
Uncheck "Tables" in the Author Mode section
Check "Tables" in the User Mode section

Checking JavaScript

Screen and Braille readers have a difficulty interpreting dynamically generated content and some "On-" event handlers using JavaScript. Opera allows you to disable JavaScript to view how the web page functions and if it a user can navigate the web page similar to how a screen or Braille reader interprets the page. Screen and Braille readers can navigate some JavaScript but this test is to check the dynamic content and "On-" event handlers. To turn off JavaScript do the following:

Click on File
Click on Preferences
Click on Multimedia
Uncheck "JavaScript"
Check "Tables" in the User Mode section

Checking Frames

When creating web pages with Frames the developer will need to check to see what happens if a user has a browser that doesn't support Frames. This can be done in Opera by doing the following:

Click on File
Click on Preferences
Click on Page Style
Uncheck "Tables" in the Author Mode section
Check "Tables" in the User Mode section

Keyboard Navigation

- Open FAA Section 508 Main page (main.html)
- Navigate from link to link and to your forms using only the keyboard – can you get to all the information on the site?
 - Press Tab to move from link to link and around the elements of a form – can you get to all the links?

Testing Color Accessibility

- View the page on a monitor set to black & white resolution or print the page on a black & white printer
- Use high contrast to ensure the page is readable
- Use **Vischeck color tool** <http://www.vischeck.com>
Color tool for checking color accessibility of web pages

Testing for Screen Reader Accessibility

All have demonstration versions available for download.

- Freedom Scientific JAWS www.freedomsci.com print out main pages
- GW Micro Window Eyes www.gwmicro.com
- IBM Home Page Reader (talking browser) www.ibm.com/able/hpr.html

FAA JAWS (Screen Reader) FAQ:

1. What if JAWS does not read the Form Fields correctly?

Answer: Check to make sure that you have coded correctly using code in the Forms section. The short cut keys for reading form fields in JAWS are:

- a. CTL+INS+TAB - go to next form field
- b. CTL+INS+SHIFT+TAB - go to previous form field
- c. ENTER key toggles form mode on and off

2. What if JAWS does not read the Select Options in a drop down box?

Answer: You must be in 'forms mode on' and then use the UP and DOWN arrow keys to toggle between the Select Options. If you hit the ENTER key, JAWS will take you out of the Forms Mode. Selecting an Option is just a matter of toggling to that selection.

3. How do I get JAWS to stop reading the page?

Answer: Press the END key.

4. How can I get JAWS to start reading a page?

Answer: Press the SHIFT+DOWN ARROW keys

5. How do I get to the top of the page?

Answer: Press the CTL+HOME keys.

6. How do I get to the end of the page?

Answer: Press the CTL+END keys

7. What if JAWS just reads through the table but it doesn't read the header information?

Answer: The following keys are used to navigate a table with JAWS:

- a. CTL+ALT+HOME - takes you to the row1, column1 data cell
- b. CTL+ALT+HOME - takes you to the last data cell
- c. CTL+ALT+HOME+UP ARROW - go up one cell
- d. CTL+ALT+DOWN ARROW - go down one cell
- e. CTL+ALT+LEFT ARROW - go left one cell

f. CTL+ALT+RIGHT ARROW - go right one cell

8. What is your testing environment?

Answer: The testing environment is Windows 95 or 95, Internet Explorer 5.5, and JAWS 3.7U.

9. What if JAWS keeps telling me that I am at the beginning of a row, end of row, top of column, or end of column in a table however I am in the middle of the table.

Answer: Check to see if you have any blank spaces, <p> tags, special character (i.e. <HR>), or a graphic. These are issues with JAWS in navigating a table.

10. What if I am in the middle of the table and when I press CLT+ALT+HOME, JAWS tells me that "I am not in the table".

Answer: See question 9. If you converted a MS-Word document with a table to a HTML page, you will have to go into the code and correct the code.

JAWS Keystroke and Functions List

JAWS Keystrokes for Reading Text

A listing of JAWS keystrokes and related functions for reading text.

JAWS Keystrokes for Navigation Information

A listing of JAWS keystrokes and related functions for navigation information.

JAWS Keystrokes for Working in Dialog Boxes

A listing of JAWS keystrokes and related functions for working in dialog boxes.

JAWS Keystrokes for Internet Explorer 5

A listing of JAWS keystrokes and related functions for navigating in Internet Explorer 5 including keystrokes for frames and forms.

JAWS Keystrokes for Working in Tables

A listing of JAWS keystrokes and related functions for navigating in tables.

JAWS Keystrokes for Cursors and Mouse Simulation

A listing of JAWS keystrokes and related functions for Cursors and Mouse Simulation.

JAWS Keystrokes for Accessing JAWS Utilities

A listing of JAWS keystrokes and related functions the utility managers within JAWS.

JAWS Keystrokes for JAWS Help

A listing of JAWS keystrokes and related functions for accessing JAWS Help.

JAWS Keystrokes for JAWS Voice Rate

A listing of JAWS keystrokes and related functions for adjusting JAWS voice rate.

JAWS Keystrokes for Microsoft word

A listing of JAWS keystrokes and related functions for Microsoft Word.

JAWS Keystrokes for Microsoft Excel

A listing of JAWS keystrokes and related functions for Microsoft Excel.

FAA Free Tools for Section 508 compliancy

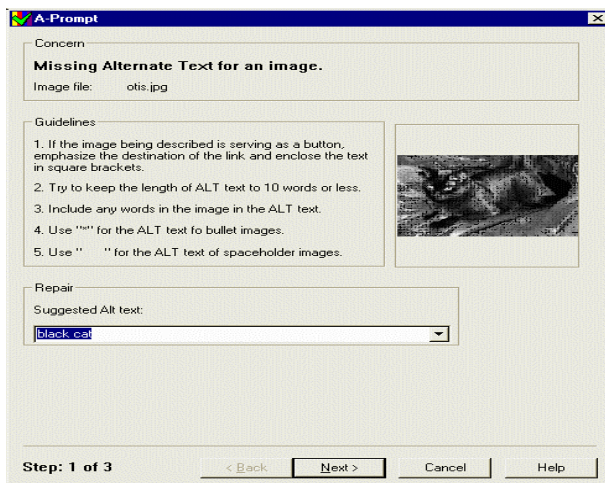


A-Prompt:

HTML validator for accessibility.

<http://aprompt.snow.utoronto.ca/index.html>

The A-Prompt toolkit is designed to make the Internet more accessible by prompting HTML authors to write better documents. Developers will be alerted of accessibility errors during development and prompted with suggestions for correction. It is not a complete program by itself but rather a module that is embedded within an HTML editor program.



In its current format as a standalone for PC platform, the A-Prompt allows the author to select a file or for validation and repair, or select an single HTML element within a file.

The tool may be customized to check for different conformance levels, based on the Web Accessibility Initiative (WAI) . If an accessibility problem is detected, A-Prompt displays the necessary dialogs and guides the user to fix the problem. Many repetitive tasks are automated, such as the addition of ALT-text or the replacement of server-side image maps with client-side image maps.

When all potential problems have been resolved, the repaired HTML code is inserted into the document and a new version of the file may be saved to the author's hard drive. After a web page has been checked and repaired by A-Prompt it will be given a WAI Conformance ranking.



LIFT accessibility tool

HTML validator for accessibility. It will validate 5 pages for free.
<http://www.usablenet.com>

How it works

1. Submit the URL of the website you want to test
2. Submit your **correct email**
3. Choose the type of the site
4. Click "GO"

LIFT Online Free Trial will download 5 pages starting from the specified page (URL), will test them against a subset of all our usability and accessibility guidelines (rules), and then will send you an email with the link to your usability report online, completely for FREE!

LIFT Online Free Trial applies a subset of rules chosen from the 70+ available in the full service to give you a flavor of the power of the technology.

The report will be available online for **5 days after the test**.

Your **correct email** is important because otherwise we would not be able to send you the link to the results.

The following **rules** are applied:

1. check that **keywords** are present
2. check that **page titles** are defined and with no HTML code
3. check that **IMG tags have explicit sizes**
4. check that **GIF images are not stretched**
5. check that **no BLINK is present**
6. check that **no MARQUEE is used**
7. check that **no SPACER is used**
8. check that the page does not contain **links pointing to itself**
9. check that **imagemap links** have redundant textual version
10. check that **email is explicit**
11. check that **home page is reachable**
12. show HTML **parsing errors**
13. show **incorrectly nested FORM tags**
14. show **invalid file paths**
15. check that **non spacer images have valid ALT** (508 and WAI/WCAG accessibility)
16. check that **spacer images have valid ALT** (508 and WAI/WCAG accessibility)
17. check that **INPUT ALTs** are valid (508 and WAI/WCAG accessibility)
18. check that **content of audio/video OBJECTs** is valid (508 and WAI/WCAG accessibility)
19. check that **FRAME titles are valid** (508 and WAI/WCAG accessibility)

- 20. check that **style sheets are not necessary** (508 and WAI/WCAG accessibility)
- 21. check that a mechanism for **skipping repetitive links** is present (508 and WAI/WCAG accessibility)

Wave Accessibility tool

HTML validator for accessibility.

http://www.temple.edu/inst_disabilities/piat/wave/

The Wave 2.01 adds icons and text to a page to help reviewers judge if it is accessible. The URL of the page under review is entered or a shortcut to the tool can be activated from a browser. The Wave evaluates alt text for image maps, applets, reading order and tables, frame titles, mouse rollovers, and Java script. This is not a tool that tests Section 508 specific requirements specifically..

FAA Frequently Asked Questions Relating to Web Accessibility Checking

Do you certify a site is compliant?

Answer: No, no one can certify that a site is compliant. The reason is that the EIT Accessibility Standards are open to as how to implement the different sections of the standards, especially web pages. We will say that we don't find any issues based on our interpretation of the EIT Accessibility Standards.

We made our own compliancy logo for our web pages does this present a problem?

Answer: Yes, my first question is are you a making yourself a certifying body for other regions or agencies? My second question is that if a site is not compliant based on a different interpretation of the EIT Accessibility Standards then will you assume the liability for anyone that uses your logo. The best thing to do is once you feel that your site is compliant let others check it and then don't add anything else to your site.

Why don't you recommend Bobby?

Answer: We do recommend Bobby as way to check a web page if any 'alt' tags are missing. You need to be aware that passing Bobby does not make you compliant.

If I'm Bobby compliant then why am I not compliant with Section 508?

Answer: Bobby will check for missing 'alt' tags. If you pass Bobby and you have an image, a picture of person's but you are using the following 'alt=""'. You have passed Bobby but failed being compliant because you did not provide 'meaningful equivalent information' for the image. Bobby does not check for errors but only tells you what you should check. You still need to know the EIT Accessibility Standards.

What about other tools?

Answer: Other tools have the same issues but in different ways. There is nothing wrong with using the free tools but know their limitations, know the EIT Accessibility Standards, and know the FAA Section 508 Guidelines.

Do you have a list of free tools?

Answer: The following is a list of free tools that you can find on the web: (Please note that the FAA does not endorse these tools nor is stating that these tools will make your web pages or

web site Section 508 compliant. This list is only to provide additional information).

- a. **A-Prompt:** HTML validator for accessibility.
<http://aprompt.snow.utoronto.ca/index.html>
- b. **Lift:** HTML validator for accessibility. It will validate 5 pages for free.
<http://www.usablenet.com>
- c. **Wave:** HTML validator for accessibility.
http://www.temple.edu/inst_disabilities/piat/wave/

Why don't you have the HTML Validator as part of your tool list?

Answer: The HTML Validator checks your HTML code to verify that it is in compliance with the HTML 4.01 coding standards. It does not verify Section 508 compliance or web accessibility. If you are not using HTML 4.01 coding standards as part of your design guide, then you will get multiple errors even though your pages are Section 508 compliant.

Testing for Accessibility

Automated validation methods are generally rapid and convenient but cannot identify all accessibility issues. Human review can help ensure clarity of language and ease of navigation.

Use the following method for validating your web pages:

1. Review your code using HTML 4.01 coding practices. HTML 4.01 code can be checked and validated at the W3C HTML Validation site (<http://validator.w3.org/>). Note: This site does not check your code or web page for being accessible.
2. Use an assistive technology device to determine whether information can be interpreted correctly on the web page. For best results, it should be used in conjunction with Internet Explorer 5.x.

Screen Readers:

- IBM Home Reader 3.0 (<http://www.ibm.com>)
- JAWS for Windows (<http://www.freedomscientific.com/>)
- Window-Eyes (<http://www.GWmicro.com/>)

3. Use W3C's CSS Validation Service (<http://jigsaw.w3.org/css-validator/>) for validating your style sheets. This test only validates code and not accessibility.
4. Test the web pages with the keyboard only, do not use an event driven device (mouse, etc).
5. Test the web page using the following condition:
 - a. Sounds turned off
 - b. Graphics or monitor turned off
 - c. Style sheets turned off

FAA Section 508 Online Training Resources

Training in the use of Color

Information about how and why to use color for web pages.

Training in the use of Non-Text Elements

Power point version of Non-Text Elements training

Information about how and why to use ALT attribute, [D] d-link, and longdesc attribute.

Training for designing tabular and layout tables

Information about how to design for layout and tabular tables. This includes using the SCOPE attribute, with the "col" and "row" elements, ID, HEADERS, and AXIS attributes for tabular tables. Examples of using the SUMMARY attribute and CAPTION tag for layout tables.

Using Opera for Testing

How to use Opera 6.0, a free browser, for testing web pages for Section 508 issues on images, style sheets and scripting. Opera 6.0 allows you check if your table is linearized which is similar to how a screen or Braille reader will read a web page.

Part 5: Web Accessibility Resources

FAA Resources:

- 1) [FAA Section 508 Intranet](http://intranet.faa.gov/aio/508): <http://intranet.faa.gov/aio/508>
- 2) [FAA Section 508 Internet](http://www.faa.gov/aio/InfoMgmt/508/index.htm): <http://www.faa.gov/aio/InfoMgmt/508/index.htm>

Federal Government:

- 1) [Access Board](http://www.access-board.gov/508.htm): <http://www.access-board.gov/508.htm>
- 2) [Section 508.gov](http://www.section508.gov): <http://www.section508.gov>
- 3) [Section 508 Self Evaluation](http://www.doj.gov/crt/web2.htm): <http://www.doj.gov/crt/web2.htm>

Non-Government sites:

- 1) [Trace Center](http://trace.wisc.edu/world/web): <http://trace.wisc.edu/world/web>
- 2) [Web AIM Resources](http://www.webaim.org): <http://www.webaim.org>
 - a) [Web AIM Tutorials](http://www.webaim.org/tutorials): <http://www.webaim.org/tutorials>
 - b) [Web Aim HowTo](http://www.webaim.org/howto): <http://www.webaim.org/howto>